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## REPORT

1924-1925

WITH the issue of this number, ÉRIU, together with the School of Irish Learning which founded it, has changed ownership. So far as outward appearance or editorial control is concerned there is but little perceptible change. The School of Irish Learning has, however, since the last report was published, ceased to exist as a separate institution. It has been incorporated in the Royal Irish Academy, upon the terms and conditions which are set forth below.

The history and progress of the School has been related in the various sessional Reports published from time to time in ÉRIU. It may be briefly resumed here.

The School of Irish Learning was founded in the year 1903, to provide instruction in Old and Middle Irish, and to train students for linguistic research and the editing and translating of the manuscript remains of early Irish literature.

Summer courses were held by distinguished scholars, including Professors John Strachan, Kuno Meyer, Henry Sweet, Rudolf Thurneysen, Holger Pedersen, Alf Sommerfelt, to which students were attracted from all parts of the British Isles, from the Continent, and from the United States. Continuous instruction was also given for some years by Professor Osborn Bergin and Professor Carl Marstrand. Travelling scholarships were awarded. The present journal, ÉRIU, was started in which the work of the students and professors and of other scholars appeared. In it have been published many hitherto unedited texts with translations; annals, sagas, ecclesiastical documents of great importance, poems, catalogues of MSS., and linguistic studies relating both to Irish and Welsh. Nine volumes have appeared up to the present, and ÉRIU has come to be recognized as the leading journal of its kind. In addition to this scientific Journal, a series of manuals and text books by professors



of the School have been issued. These are now the standard works in all universities where Irish is studied. A valuable library of upwards of 300 volumes, including Facsimiles and photographs of MSS. was formed.

The income of the School was derived from (1) Subscriptions to the Journal, and sales of publications; (2) Students' fees; (3) A grant in aid of its Journal from the British Treasury, from 1905 to 1913, £ 700 in all; (4) Donations from private individuals. Further, a generous American sympathiser, Mr. Thomas Kelly, paid the rent of the rooms occupied by the School down to the year 1919.

When Chairs and Lectureships in Early and Modern Irish were established in the colleges of the National University, in addition to those already existing in Trinity College, that teaching which it was primarily the object of the School of Irish Learning to provide, was to a great extent taken off its hands. Accordingly, its function of late years has been mainly publication, and the holding by scholars of repute of special summer courses in subjects not provided for elsewhere.

Deprived of its grant in aid, and subject for some years to a heavy rent, the School could not well maintain itself longer as a separate institution on the income derived from the sale of its publications, which was only sufficient to cover the cost of production, furnishing a margin of profit insufficient for rent and upkeep. In these circumstances the Governors and Trustees met to consider the future of the School. They felt that in the present condition of affairs it would be unavailing to make application for an annual grant to a Government which was already overburdened, and that for some time to come but little support could be counted on from private sources. Amalgamation with some other institution with like objects seemed to them desirable if the work of the School was to be carried on.

The Hon. Secretary was accordingly empowered to approach the Council of the Royal Irish Academy with a view to the incorporation of the School in that body, which it was thought would not be without advantage to the Academy, and would tend further to promote Irish studies.

The matter having been brought before the Council, a Sub-Committee consisting of the Rev. W. R. Westropp Roberts, D. D. (Treasurer), R. Lloyd Praeger, D. Sc. (Librarian), E. J. Gwynn, M. A.,

F. T. C. D. (Secretary for Foreign Correspondence), and R. I. Best, Litt. D., was appointed to consider the proposal and to report to the Council.

The Sub-Committee in recommending the proposal to the Council, expressed the opinion that the Academy was not being called upon to embark on any new schemes or to effect any change in its present organization by the incorporation of the School of Irish Learning, since the study and investigation of the Irish language, and the publication of texts had always been its especial care; that in taking over ÉRIU, the Journal of the School, it would be merely carrying on this work through a recognized channel of high repute, the contributors to which were for the most part members of, or connected with, the Academy; that an economy of effort would result, and the credit of the achievement would not as heretofore be divided; further that it would be a distinct gain to students if papers on Irish subjects read before the Academy were brought together under one cover, and thus made more easily accessible than if they were scattered among a mass of papers dealing with a variety of subjects.

The Council of the Royal Irish Academy and the Governors and Trustees of the School of Irish Learning respectively adopted the recommendations of the special Sub-Committee. The Governors and Trustees on their part agreed to hand over to the Academy the copyright and entire stock of ÉRIU and the other publications of the School; further, such portion of the School Library, book-cases, and other furniture as might prove acceptable; finally any balance which remained in the Bank after the outstanding liabilities of the School had been defrayed.

The Council of the Royal Irish Academy on its part agreed to continue to issue ÉRIU annually as its own publication, adopting the same format, and using the title: ÉRIU, founded as the Journal of the School of Irish Learning, so as to preserve its continuity; to publish such new editions of the other publications referred to as might be thought advisable by the Council, and further to hold from time to time courses of Lectures which would tend to advance Irish studies, if funds were specially provided for the purpose.

The Governors and Trustees met for the last time on April 28<sup>th</sup> 1926. The audited Balance-Sheet was submitted and approved. The Hon. Treasurer, Professor T. F. O'Rahilly, M. A., reported that the stock of publications, library, furniture, etc., of the School had



been transferred to the Academy in accordance with the agreement entered into.

The Governors and Trustees desire here to express their satisfaction that ÉRIU and the work of the School of Irish Learning in general is to be continued under the Royal Irish Academy. They also desire to renew their grateful thanks to all those who in various ways have so generously supported the School in the past, and to express the hope that they will continue to co-operate in the advancement of Irish studies by subscribing to ÉRIU through the Royal Irish Academy.

## ON THE NOTATION AND CHRONOGRAPHY OF THE CALENDAR OF COLIGNY<sup>1</sup>

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### I. GENERAL DESCRIPTION

ABOUT twenty-seven years ago, a bronze statue and many fragments of a bronze tablet were unearthed in a vineyard at Coligny, near Bourg, in the department of Ain. The fragments, now preserved in the museum at Lyons, were found to contain the remains of a table of 62 consecutive months, including two intercalary months. They amount to about three fifths of the original tablet. The tablet was divided into 16 vertical columns. Each column contained the tables of four months, except columns 1 and 9, each of which began with an intercalary month and contained the tables of two other months, each intercalary month occupying about half a column. The 62 months are approximately equal to five solar years, but, except for a statement which precedes the second intercalary month at the head of column 9 and which gives the total number of months (13) and days (385), presumably with reference to the thirteen months that follow, there is nothing in the extant material that marks explicitly the beginning or end of any year.

The language of the Calendar was easily recognised to be Celtic, and the fragments constitute the sole extensive document of Celtic language that has come down from an earlier time than the oldest manuscript remains of Irish. Owing to the nature of the contents, the vocabulary is limited, not exceeding some 60 words,

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<sup>1</sup> Read before the Academy, April 28, 1924.

some of which recur hundreds of times. Only a few words are written in extenso, and the number of which the full forms can be established with an approach to certainty does not exceed 25. Abbreviations, used as freely as in modern bookkeeping, bespeak thorough familiarity with reading and writing in the language of the Calendar.

Caesar tells us that, in his time, "in almost all their affairs, public and private", the Greek alphabet was used by the Gauls, and that a complete census of the migrating Helvetii, written in Greek characters, and containing the names of 263,000 persons, fell into his hands. The Helvetii were farther removed from Greek influence than the Sequani, in whose ancient territory the Calendar was found. The Calendar, however, is engraved in Roman characters and uses the Roman system of numeration, and its orthography is based on Latin. There remain a few traces of an older orthography, based on Greek, such as is found in a number of Gaulish inscriptions. In the word TIOCOBREXTIO, it is hardly doubtful that X has its Greek value, but its Latin value in EXO, EXINGI. In LOVD., ATENOVX, we find OV, which was the contemporary Greek expression of Latin and Celtic *u*; in TRINO(VX), TRINVX, there is oscillation between an older and a newer spelling; in CVTIOS, DIVERTOMV, DVMANNI, IVOS, OCIOMV, etc., the Latin V is exclusively used.

Apart from the two intercalary months, the following are the names of the months in the order in which they are found: 1 Samon(ios). 2 Dumann(ios) (Dumannos?). 3 Rivros. 4 Anagantios. 5 Ogron(ios). 6 Cutios. 7 Giamon(ios). 8 Simivisonna-. 9 Equos. 10 Elembiv-. 11 Edrin(io)s (Edrinos?). 12 Cantlos.

Of these, the following genitives are found: Samoni, Dumanni, Rivri, Ogroni, Giamoni, Equi, Edrini, Cantli—all showing o-stems. Rhys assumes that all the names except Rivros, Equos, and Cantlos, ended in *-ios*. Only Anagantios and Cutios actually show this ending. There is some evidence for Edrinios, Ogronios and Giamonios, and, by analogy, for Samonios. There is nothing to show how Elembiv- should be extended, but in the Vocabulary (section VII) I offer an etymology based on Elembiv(ios). . . . SONNA . . . in the notation of day 2 of the first intercalary month is against Simivisonnios, the extension adopted by Rhys for this name, which may have had one or other of the frequent Celtic adjectival endings *-atis* and *-acos*.



ANTARAN, in the heading of the second intercalary month, seems to be an abbreviation of the word equivalent to *intercalaris*.

The first two headings of monthly tables begin with the word MID(X?), MID., abbreviated in all the other headings to M, and understood to signify "month". The names of months in the headings, wherever the case is determined, are nominatives: Rivros three times, Anagtio (for Anagantios) once, Cutios once, Equos five times, [Edrinio]s once, Cantlos five times.

In the headings, the name of each month is followed, in smaller letters and higher alignment, by one or other of the abbreviations MAT, ANM. Instead of MAT, the first intercalary month has MATV[S], equated with Irish *maith* "good" < \**matís*. ANM is understood to represent the same word with the negative prefix *an-*, frequent in Irish. The name of every 30-day month except Equos is followed by MAT; the name of Equos and of every 29-day month, by ANM.

The classification of months as "good" and "not-good" is reflected in the notation of the days of each month. The diurnal notation begins with the date-number. The numbers are in vertical alignment on the left of the table of each month, from I to XV. Beneath the line of the 15th day, every month has the subheading ATENOVX, and beneath this the numbers begin again with I and continue in vertical alignment down to XIII or XV, according as the month has 29 or 30 days. In other words, the reckoning is by half-months, and the days are dated in each half-month, *atenoux* being the generic name for the second half of a month. A second vertical alignment is made at some distance to the right of the first, and serves for placing the letters D or MD which accompany most of the dates. D is understood to signify the word for "day" (\**dij-*). M in a few instances is expanded to MAT or MA = \**matus* "good". When MAT is found in the heading of the month, each date, with certain regular exceptions, has the notation MD. When ANM is found in the heading, each date, with certain regular exceptions, has the notation D. In other words, a "good day" is a day belonging to a good month, whereas the ordinary day of a "not-good" month is merely a "day", without qualification.

To the right of the second vertical alignment, there is space amounting to about two-thirds of the month-table. In this space

the further notation, if any, belonging to each date is entered in the horizontal alignment of the date-number.

Certain days derive their notation from months other than those in which they are dated. Of such transferred notations there are several distinct kinds, hereinafter described. The qualities denoted by D or MD can be derived regularly by transference instead of being determined by the "good" or "not-good" character of the month to which the notation is transferred.

The notation AMB is normally found at days 5 and 11 of each month and at days 3, 5, 7, 9, 11, 13, and 15 (all the odd numbered days except day 1) of each *atenoux*. Where AMB is found it is regularly accompanied by D, never by MD. AMB may be displaced by transference and by certain other notations to be mentioned later. For further remarks on AMB, see the Vocabulary.

At the end of each 29-day month is inscribed the word DIVERTOMV. For a discussion of this word and for its variant spellings, see the Vocabulary.

The foregoing features, already well recognised, constitute the framework of the Calendar. Other notations are the subject of special discussion in this paper.

## II. DATE OF THE CALENDAR

Thurneysen<sup>1</sup> formed the view that the Calendar, as a document, dates from the first or second century of the Christian era, and he rather favoured the later date. In my opinion, its date is not likely to have been later than the reign of Claudius and may have been as early as any time in the reign of Augustus; roundly, I would place it in the first half of the first century or the second half of the preceding century. A decision may be reached on grounds of palaeography which are beyond my scope.

A prior limit of date is fixed by the use of the Roman alphabet and the Roman numeration. Already before Caesar's conquest, a number of Gaulish states used the Roman alphabet in the inscription of their coinage. Among these were the Aedui, neighbours of the Sequani to whose territory the Calendar apparently belonged. Of the Sequani themselves there exist coins of date (according to Holder) about 63 B. C., bearing in Roman letters

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<sup>1</sup> Der Kalender von Coligny (ZCP. II, 523 ff.).



the inscription SEQVANO IOTVOS ("the Sequanian [ruler] Iotuos"). Like the Coligny Calendar, this inscription retains the Gaulish desinences and, like the Calendar, unless we suppose the unlikely compound personal name *Sequanoiotuos*, the inscription shows the nominative ending *-os* preserved in full and also reduced to *-o*. The lettered folk of Gaul must have quickly come to realise the fact that the Greek alphabet and orthography were less suited than the Roman to the phonesis of their language. Nevertheless, in view of Caesar's testimony already mentioned, it seems unlikely that an extensive document of a cultural kind, such as this Calendar, would have been drawn up in Roman characters and in an orthography mainly based on Latin before the time when Roman cultural influence became locally predominant.

That time arrived under Augustus, whose policy comprised the active Romanisation of Gallic culture, including Gallic religion. To this end it was necessary to overthrow the influence of the Druids. According to Suetonius: *Druidarum* religionem apud Gallos dirae immanitatis et tantum civibus sub Augusto interdictam Claudius penitus abolevit. Neither Gallic polytheism nor the practice of human sacrifices, the excuse of Roman statecraft for hostility to the Druids, was peculiarly or specifically the "religio *Druidarum*". It was quite possible to forbid and penalise human sacrifices and to leave Druidical culture in the main intact; for Druidical culture extended to all matters of religious theory and practice, to law and judicature, to astronomy and physiology; and it was propagated by a system of organisation and education for which Roman culture had no competing equivalent. Accordingly Augustus instituted a policy of political disabilities against the adherents of Druidism. We may probably infer from the words of Suetonius that those who flocked to the druidical schools were excluded from the much prized advantages of Roman citizenship.<sup>1</sup> This

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<sup>1</sup> It cannot be too strongly emphasised that the Druids were not, as they are often said to have been, a priestly caste or order. The priests of Gallic religion were the *Gutuatri*, and these were not excluded from Roman citizenship. In one inscription, a *Gutuater* testifies of himself: "*Gutuater, praefectus coloniae, qui, antequam hic quiesco, liberos meos utrosque vidi, Nonnium Ferocem flaminem (et) duumvirum bis, [et . . .]*". Another inscription tells of "*Sulpicii, Marci filii, Galli, omnibus honoribus apud suos functi, duumviri q[ui]nquennalis?*", *flaminis Augusti, primogenii dei Moltini, gutuatri Martis, sex cui ordo quod esset civis optimus et innocentissimus statuas publice ponendas decrevit*". (Holder, *Alt. Spr. s. v. gutuatros*).

measure was not fully effective, and under Tiberius the profession of Druidism seems to have been made illegal—under what penalties, we are not told.<sup>1</sup> Yet something remained to be done, and we may understand the “thorough abolition” of the Druids under Claudius in A. D. 43 to have been a drastic work.<sup>2</sup> The last stage of Druidism in Gaul, where it could still attract the noblest of the nation, is described by Mela as a contemporary fact: “Docent multa nobilissimos gentis clam et diu, vicens annis, aut in specu aut in abditis saltibus”.

Except for the use of Roman characters and numeration, the Coligny Calendar shows no trace of Roman influence. In particular, it is wholly independent of the Roman calendar. It represents a tradition and a culture that were not Roman and were not favoured by Roman policy. It is not questioned that the Calendar was drawn up for public use. It was engraved on a sheet of bronze, which was rivetted to a bronze frame. A bronze statue was found hidden away with the fragments, and the view has been generally taken that both statue and Calendar belonged to a temple. The place where they were found is at no great distance from Lyons, where they are now preserved, and Lyons, under the Romans, was the capital of the greatest part of Gaul, the chief centre of Roman government, culture, and influence. It is quite imaginable that a calendar dating from the time of distinctive Gallic culture could be preserved after that culture had been suppressed, but it appears most unlikely that a calendar of this kind would have been drawn up and set up anew in the neighbourhood of the Roman capital at any time after the proscription of the Druids under Tiberius.<sup>3</sup>

Further evidence of comparatively early date is afforded by the traces of the older spelling, based on Greek, which have been already mentioned. Thurneysen has found an indication of relative lateness in the spelling AEDRINI, AEDRIN, four instances, beside EDRINI, EDRIN, etc., eight instances. The spelling EDVIS,

<sup>1</sup> “Tiberii Caesaris principatus sustulit druidas eorum et hoc genus vatium medicorumque per senatusconsultum”. Plin. N. H. 30, 13.

<sup>2</sup> Human sacrifice had been abolished earlier, for Pliny says of it, just before the words quoted in the foregoing footnote: “Gallias utique possedit, et quidem ad nostram memoriam”.

<sup>3</sup> There may be a faint possibility that the Gallic revolt against Vespasian in A. D. 69 gave occasion for an attempted restoration of Gallic chronography.



however, is found on the coins of Orcetirix, a ruler of the Aedui, called by Plutarch (Caes. 26) τὸ τῶν Ἑδούων ἔθνος; and the river Inn is *Áīros* in Ptolemy, Aenus in Tacitus, *Ἐνος* in Arrian. It may be observed here that the coinage of the Aedui, like that of the Sequani, bears Roman letters.

### III. TRANSFERENCE OF DIURNAL NOTATION

By Diurnal notation, I mean everything that is inscribed in the horizontal alignment of any date in the table of a month. In following the descriptions and argument, the reader should refer to the "Revised Reconstruction" in section VIII. The general arrangement of the "Revised Reconstruction" follows the plan of the "Reconstruction" edited by Rhys in vol. iv of the Proceedings of the British Academy. I have, however, indicated lacunae by square brackets, where Rhys indicates them by varying the typography. Except in the two intercalary months, in which the notation of a single date may occupy two or more lines, each date has a single line and no more in the table of its month; and for this reason, except in the intercalary months, I have not thought it necessary to place within brackets the date-numbers which fall within lacunae. The manner of reference to dates is sufficiently explained by the following examples:

Equos III 7 signifies the seventh day of Equos in "year 3".

Cantlos IV Aten. 7 signifies the seventh day of the *alenoux* (the second half-month) of Cantlos in "year 4".

"Year 3" signifies the third series of twelve months beginning with Samon., not reckoning the intercalary months. I do not agree with Rhys in his taking for granted that each such series corresponded to a "calendar year" in the minds of those who drew up and used the Calendar.

"Day 7" signifies the seventh day of the first half of a month; "Aten. 7" the seventh day of the second half.

Interc. I and Interc. II signify the first and second intercalary months respectively.

Except as regards the notation IVOS, a transferred notation is indicated in the Calendar by the name of the month of origin entered against the date to which the notation is transferred. The name may be either nominative or genitive. Thus the transference

of the notation PRINI LOVD from Samon. 7 to Cantlos III 7 is indicated at the latter date by the entry SAMON PRINI LOVD.

There are three distinct kinds of transferred notation:

1° notation transferred by interchange between two consecutive months.

2° notation of the successive dates of the intercalary months, derived date by date from the other months in their serial order.

3° notation transferred from each month to the preceding month within a series of twelve months following each intercalation.

I use the terms "transference by interchange" in reference to the first kind, "serial notation" in reference to the second, and "intercalary displacement" in reference to the third.

Transference by interchange is found at the following dates in the following pairs of months:

	Samon. 1	><	Dumann. 1
	Samón. Aten. 1	><	Dumann. Aten. 1
(Probably)	Samon. 3	><	Dumann. Aten. 2
	Rivos 1	><	Anagantios 1
	Ogron. Aten. 1	><	Cutios Aten. 1
	Ogron. Aten. 2	><	Cutios Aten. 2
	Ogron. Aten. 3	><	Cutios Aten. 3
	Ogron. Aten. 8	><	Cutios Aten. 8
	Giamon. 1	><	Simivisonn. 1
	Simivis. 3	><	Equos 3
	Simivis. 6	><	Equos 6
	Simivis. 13	><	Equos 13
	Simivis. 14	><	Equos 14
	Simivis. 15	><	Equos 15
	Simivis. Aten. 1	><	Equos Aten. 1
	Simivis. Aten. 2	><	Equos Aten. 2
	Simivis. Aten. 3	><	Equos Aten. 3
	Simivis. Aten. 6	><	Equos Aten. 6
	Elembiv. Aten. 1	><	Edrin. Aten. 1
	Elembiv. Aten. 2	><	Edrin. Aten. 2
	Elembiv. Aten. 3	><	Edrin. Aten. 3
	Edrin. 1	><	Cantlos 1.

To exemplify the interchanged notation: Simivis. 6, instead of MD, has D EQVI; and Equos 6, instead of D, has MD SIMIVISO.



It will be seen that the interchanged notation links the months in three pairs and two triads. Simivis, and Edrin, exchange notation both with the preceding and with the following month.

Except in one instance, the interchanged notation has the same date in each of the two months. The exception is Samon. 3 >< Dumann. Aten. 2. We may conjecture that the notation D DVMANNI cannot appear at Samon. Aten. 2, because that date has a special notation TRINVX SAMO(NI), which is peculiar to it and has no parallel elsewhere. It is not at all evident, however, why DVM(ANNI) should appear instead at Samon. 3, rather than at other dates in this month.

The second intercalary month is linked by interchanged notation of day 1 with the following month Giamonios. The interchange is signified in the notation of Interc. II 1 by [M]D SIMIVIS, indicating that this date has its office supplied from Giamon. 1, which already has its office supplied from Simivis. 1. A fuller form of the notation would have been MD SIMIVIS GIAM "a good day of Simiv. in Giamon." as at Giamon. III 1. The counterpart of this notation is not found in Giamonios, which is defective for day 1 in three of the five years.

By analogy, we might expect that the first intercalary month was linked by interchange with the following month Samonios, not necessarily at day 1. The material is too fragmentary to enable this expectation to be tested. We may note that the notation occupied four lines at Interc. I 7, three lines at Interc. I 9, and three lines at Interc. I Aten. 8, showing that these dates had a more than usually copious notation; one or more of them may have been furnished by interchange.

The serial notation of the dates in the intercalary months was long ago observed by M. Espérandieu. The series, it may be noted, begins with Gia[monios], Interc. I 1, [Simivi]sonna . ., Interc. I 2. Then comes a long lacuna, the next name being [ED]RIN (where Rhys has wrongly read RIV) at Interc. I Aten. 2. After this, in due order come [SAMO]NI, DVMANNI, RIVRI, ANAGAN, then another lacuna extending to the end of the month, where the last date should have CANTLI. Interc. II resumes the series where Interc. I leaves off, and the sequence is complete to the end of the month except for the lacuna at days 6, 7, 8, and 9.

The 60 days of the two intercalary months have the serial notation of the twelve normal months repeated five times.

It is evident that the Calendar was the timetable of an elaborate ritual in which every day had its proper office. The intercalary months were introduced, so to speak, from nowhere, and their dates had no proper offices. They could not be left void, and so the normal months were laid under contribution, each in its turn, to supply the office of each vacant date.

The thing which was transferred belonged not only to the month indicated by name in the notation of transference, but to a particular day in that month, bearing the same numerical date as the day which received the notation. A single instance will suffice to illustrate this fact, which the reader may verify for himself in the other instances, and which accounts for all the apparent exceptions to the sequence of serial notation. At Interc. II Aten. 2, the month from which the notation should be supplied in the serial order is Ogronios. The actual notation is MD QVTI IN OGRON. For explanation, let us refer to the corresponding date in Ogronios. There we find, in years 4 and 5, MD QVTIO. Thus the notation of Interc. II Aten. 2 signifies "A good day of Cutios in Ogronios."

We draw the further inference, which can be verified generally, that the process of transference by interchange (Ogron. Aten. 2 > < Cutios Aten. 2) is prior to the serial transference which supplies the notation of the intercalary months. It is also prior to the third kind of transference, which is likewise connected with intercalation. A notation already transferred by interchange may be transferred again by either of the other two processes. And we have the curious result, e. g. at Ogron. III Aten. 8, that the notation transferred from a certain date by interchange may be transferred back to that date by the third process.

The dates which supply the serial notation of the intercalary months are marked in the Calendar by the notation NS DS, usually abbreviated to N. This notation should thus be found at 60 dates in serial order. Owing to the lacunae, it is actually found at only 14 dates, but these are sufficient to demonstrate the serial sequence. I show here the complete series of 60 dates, indicating by italics the dates at which N or NS DS is actually found.



Giam. 1	Giam. 13	Giam. Aten. 10	Giam. 7	Giam. Aten. 4
Simi. 2	Simi. 14	Simi. Aten. 11	Simi. 8	Simi. Aten. 5
Equos 3	Equos 15*	Equos Aten. 12	Equos 9	Equos Aten. 6
Elem. 4	Elem. Aten. 1	Elem. Aten. 13	Elem. 10*	Elem. Aten. 7
Edr. 5	Edr. Aten. 2	Edr. Aten. 14*	Edr. 11	Edr. Aten. 8
Cant. 6	Cant. Aten. 3	Cant. Aten. 15*	Cant. 12	Cant. Aten. 9
Sam. 7	Sam. Aten. 4	Sam. 1	Sam. 13	Sam. Aten. 10
Dum. 8	Dum. Aten. 5	Dum. 2	Dum. 14	Dum. Aten. 11
Riv. 9	Riv. Aten. 6	Riv. 3	Riv. 15	Riv. Aten. 12
Anag. 10*	Anag. Aten. 7*	Anag. 4	Anag. Aten. 1	Anag. Aten. 13
Ogr. 11	Ogr. Aten. 8	Ogr. 5	Ogr. Aten. 2	Ogr. Aten. 14
Cut. 12	Cut. Aten. 9	Cut. 6	Cut. Aten. 3	Cut. Aten. 15

\* Anag. IV Aten. 10 has NS DS, perhaps engraved by mistake instead of at Anag. IV 10. Elem. VI 15 has N, perhaps by mistake instead of at Equos V 15. Anag. Aten. 7 in each year has N INIS R. At Edrin. Aten. 14, in each year Rhys read MD; the material is obscure in the photographs, and I have hope that close inspection may show N or NSDS at one of the dates. Cant. Aten. 15 is a non-existent date, which nevertheless in serial order should supply the notation of Interc. I Aten. 15—on this point see the footnote to the lastnamed date in Section VIII. Elembiv. 10 is occupied in each year by the notation N INIS R, in which, as will be seen later, N is equivalent to NS DS.

The third kind of transference, which I have called intercalary displacement, deserves special attention. Throughout each series of twelve months beginning with and including an intercalary month, (1) each month derives the notation of days 7, 8, and 9, both in the first half-month and in the *atenoux*, from the same respective days in the month which follows it; and (2) each month derives the notation IVOS, at whatever dates it is found, from the same dates in the month which follows it.

The first series thus affected begins with Interc. I and ends with Edrin. I. The second series begins with Interc. II and ends with Ogron. IV. The nineteen months which follow each of these series do not exhibit any such displacement either of the notation IVOS or of the notation of the two groups of three dates above mentioned.

Hence, in comparing month with month, we must bear in mind that the 62 months contain, twice in succession,

12 months subject to intercalary displacement, and  
19 months free from intercalary displacement.

The months in the two series of 19 (beginning with Cantlos I and Cutios IV) may be regarded as exhibiting normal notation. In fact, their notation, if we compare the material for any month in one year with the material for the same month in another year, rarely shows variation. Moreover, exclusive of days 7, 8, 9 in each halfmonth, and of the notation IVOS, the notation of any particular date, with rare exceptions, is repeated for that date in each of the five years.

It is to be noted that, whereas in the case of the two groups of dates, 7, 8, 9, the entire notation of these dates undergoes displacement, in the case of IVOS no part of the notation is transferred except IVOS itself. Thus, for example, Cantlos III 1, 2, 3 derive IVOS by intercalary displacement from Samon. 1, 2, 3 (as in year 2), and retain their normal notation in addition, and nothing except IVOS is displaced from the three dates in Samon.

The origin and motive of intercalary displacement are suggested by something analogous. Hallow Eve, traditionally representing the ancient pagan festival of Samain, is a time for the practice of various kinds of divination with a view to learning something about the future, especially the matrimonial future; but the tradition of the elders, in my own recollection, was that all such divination was in vain unless it was practised on "Old Hallow-Eve" (Nov. 11). In my native locality, the term for the letting of pasturage ran from May 12 to Nov. 12, and these were the recognised dates for the old customary hiring of servants by the half-year. An event, which, as the ballad testifies, befel "July the first in Oldbridge town" is still celebrated on July the twelfth. These dates of traditional importance refused to conform to a reformed calendar and adhered to the "old style." Systematic intercalation of the lunar calendar was a learned reform. It may have been introduced in Gaul by the Druids, who were the theologians and philosophers, but not the priests, of Gallic religion. In the Coligny Calendar, intercalation is allowed to move forward the functions of most dates, but it is not allowed to interfere with the function called *ivos* or with the office of the middle triduum in each half-month.



These, or the rites belonging to them, hold their ground as if there had been no intercalation.

There was, nevertheless, a limit to their persistence; for, in the absence of a limit, each successive intercalation would have added a month to the distance between the actual functions and the dates to which they conventionally belonged, and in the course of a single generation the movement would have amounted to a whole year. The limit fixed in the Calendar is twelve months; at the end of that time the disturbing effect of intercalation ceases to operate. The cessation is explicitly signified in the thirteenth month, Cantlos I. There, days 7, 8, and 9 have the notation CANTLI, to show clearly that they belong to their own month and retain their own proper office. Possibly also the abbreviation DIB which accompanies IVOS at the last date of this month may indicate the return to normal. It follows that the office of Cantlos 7, 8, 9 (and no doubt of Cantlos Aten. 7, 8, 9, which fall within a lacuna) was duplicated in this year, being celebrated first in the preceding month and again in Cantlos itself; and the office indicated by IVOS in like manner. The Greek method of effecting intercalation by duplicating one of the ordinary months was somewhat analogous.

It is evident that in each month, and in each half of the month, days 7, 8, and 9 were of special importance. The clue to their importance is found in a passage of Pliny. Speaking of the use of the mistletoe (*viscum*) in divination by the Druids, Pliny says:

Est autem id rarum admodum inventu, et repertum magna religione petitur, et ante omnia sexta luna, quae principia mensum annorumque his [scil. druidis] facit, et saeculi post tricesimum annum.

Rhys quotes this passage in translation ("The Coligny Calendar", p. 42). He finds it "significant as suggesting that it was the Druids who had charge of matters relating to the Calendar"—as indeed we should expect in view of their recognised authority as experts in astronomy and theology. He misses, however, the significance of the words bearing on the Calendar, rendering them thus: "They do this especially on the sixth day of the moon, *the luminary* which marks the beginning of their months and their years;" and he comments: "Here we have the first five days of

*the month* conspicuously avoided." It was not the moon, according to Pliny, but the sixth day (or rather night) of the moon, that made the beginnings of months and years for the Druids.

I now quote from a communication, printed by Rhys in the same paper, from Dr. Fotheringham, an expert in the study of calendars:

"The earliest calendars reckoned the month from the first appearance of the moon, which is on an average at the first sunset which happens not less than thirty hours after new moon, so that the mean age of the moon when first seen is . . . 1 day 18 hours. The mean age of the moon when full is . . . 14 days 18 hours. Therefore the mean interval between the first appearance of the moon and the full of the moon is 13 days 0 hour. In other words the moon becomes full on an average at the end of the thirteenth day and the beginning of the fourteenth night. Hence, when the days are reckoned from sunset, we should expect the fourteenth day of the month to be regarded as the day of the full moon. And it is in fact one of the days most commonly so regarded . . . All over the world great festivals have been celebrated at the full moon, cf. Passover and Tabernacles among the Israelites, Carneia at Sparta."

Thus the druidical date of full moon was the eighth of the month. But, since the months varied in length between 29 and 30 days, the date of full moon must be allowed to fall sometimes a day earlier, sometimes a day later, than the calculated mean date. Hence, in a calendar for permanent recurrent use, the 7th, 8th, and 9th of the month figured jointly as the time of full moon. The opposite phase of the moon was dated 15 days later, that is, on the 7th, 8th, and 9th of the second half of the month.<sup>1</sup> Thus Pliny's statement explains the special importance of these dates in the Coligny Calendar, the Calendar corroborates his statement, and the correspondence of the two affords positive evidence of a fact, which *a priori* was highly probable and which

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<sup>1</sup> In like manner, owing to the variation of a day in the calculated length of the solar year, the Romans, according to Columella (quoted by Dr. Fotheringham in the communication above mentioned), allowed sometimes two days, sometimes three days, for the date of the summer solstice. The Coligny Calendar uses the term *trinix* "three-night" to designate the summer solstice.



Rhys took for granted, namely that the Calendar belonged to druidical culture.

Like these dates, the notation IVOS suffers displacement in the Calendar, that is to say, it resists displacement in actuality, within the period held to be affected by intercalation, the twelve months commencing with an intercalary month. We have to consider how this notation is distributed. In the months not affected by intercalation, IVOS is found at the following dates:

the first three days of Samonios  
 the last five days of Samonios  
 the first four days of Dumann.  
 the last five days of Rivros  
 the first three days of Anagantios  
 the last three days of Cutios  
 the first three days of Giamonios  
 the last five days of Equos<sup>1</sup>  
 the first five days of Elembivios<sup>1</sup>  
 the first three days of Edrinios  
 the last two days of Cantlos

and also at Rivros 13 and 14, Rivros Aten. 3 and 5, Simivis. 9, Edrin. Aten. 10. In all, IVOS is found at 47 dates. Of these 41 are grouped around the beginning and end of months, always, except in Edrin., in such a way that the grouping extends from the end of one month to the beginning of the next month. There are in fact only six groups: 1° Samon.—Dumann.; 2° Rivros—Anagantios; 3° Cutios—Giamon.; 4° Equos—Elembiv.; 5° Edrin.; 6° Cantlos—Samon. All these groups occupy a middle position between the dates of new moon and full moon. When IVOS is transferred, the diurnal notation of the dates from and to which it is transferred is not otherwise disturbed. IVOS is therefore associated with a particular position in the month, rather than with the office or function of a particular day.

The division of the months into two halves, so that the time of full moon is in the middle of the first half and the time of new moon in the middle of the second half, enables us to understand why the second half is called *atenoux*. The prefix *ate-*

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<sup>1</sup> It will be shown (p. 29) that in Equos and Elembivios IVOS is proper only to four days, not five.

(> Irish *aith-*) corresponds in sense to the Latin *re-*. Irish *athlá* means "a day yet to come", *ath-uair* "another (and future) time, a second time", *aith-bhliadhain* "(the) following year". We may interpret *ate-noux*, then, as meaning the "returning night", the "after-night" of the month—the sense of "after" being perhaps specially brought out by the prefix because in Celtic tradition the night was the first part of the day. The month was divided into a half of maximum moonlight and a half of minimum moonlight.

Hindu calendars, ancient and modern, divide each month into a bright half and a dark half, and, like the Coligny Calendar, number the days separately in each half. They have the full moon, however, in the middle of the month. Is it possible that the Coligny Calendar preserves the older Indo-European tradition, and that the commencement of months with the new moon was adopted from some oriental civilisation?

We need not expect to find much trace of early Celtic chronography in the later traditions of peoples of Celtic language. A system of chronography which combined the lunar paschal reckoning with the Julian calendar became of the highest ritual importance to the early Christian Church, and we know from the course of the Irish paschal controversy that the calendar was almost a test of orthodoxy. If those who dissented in the computation of Easter were subjected to strong denunciation and regarded as refractory members, we cannot doubt that the observance of a heathen tradition of chronography would have been treated as a kind of apostasy. Nevertheless, the reckoning by half-months leaves its trace in the Irish word *cóicthiges*, which, though it came to mean a fortnight, must originally have meant a space of 15 days, Welsh *pythefnos* = fifteen nights; perhaps also in the French expression *quinze jours* and in the Cymric method of counting, *un ar bymtheg*, etc.

#### IV. CERTAIN RECURRENT NOTATIONS

By a recurrent notation, I mean a notation which belongs to the same month and day throughout the five series of twelve months, except where it is transferred and replaced by another notation in accordance with the rules of transference already described. By far the most frequent of such recurrent notations

are MD, D, and AMB. The distribution of these, which may be said to form the groundwork of the diurnal notation of the Calendar, has been explained above. There are other recurrent notations of less frequency, which remain to be described.

PRIN(N)I, PRIN(N)O, abbreviated often to PRIN, PRI, or PR, is always followed by one or other of the words LOVD. (LOVDIN Sam. II 7, [I]OVDIX? Dum. II 1), further abbreviated to LO., or LAG. (LAGIT Dum. II 5, LAGE Dum. I 5, Dum. III 5), further abbreviated to LA.

PRINNI LOVD is proper to the "good" months in the following cycle of dates: Sam. 1, Riv. 2, Ogr. 3, Cut. 4, [Sim. 5, Edr. 6,] Sam. 7, Riv. 8. By transference, however, it may appear at a corresponding date in another month. Thus, through interchange, the PRINNI LOVD of Sam. 1 is transferred to Dum. 1; by intercalary displacement, Cantlos III 7 has SAMON PRINI LOVD.

In Sim. 5, PRINNI LOVD is replaced by N INIS R. I can suggest no reason for this substitution. For Edrin. 6, the material is not forthcoming in any year.

PRINNI LAG. is proper to the "not-good" months and to the following cycle of dates: Giam. 1, Equos 2, Elem. 3, Cantlos 4, Dum. 5, Anag. 6, Giam. 7, Equos 8, Elem. 9. By interchange, Sim. 1 has GIAMN. PRIN. LAG. By intercalary displacement, Cutios I 7 has GIAM. PRI. LAG., Sim. I 8 has EQV. PRI. LA, Sim. III 8 EQVI PRINNI LA.

In Sam. IV Aten. 2, PRINI, and in Sam. V Aten. 2, PRINO, are errors of engraving for TRINV(X), TRINO(VX), (see Sam. I and II, Aten. 2).

The notation PRINNI is not accompanied at any date (except for the two errors just mentioned) by MD, D, or N INIS R, or by the triple-bar signs discussed later. Cantlos V 4 has PRINN.N. LAG, a singular and unexplained variation.

It will be noted that in each of the cycles of PRINNI, the months proceed in calendar order, the days in numerical order; also that the cycles begin with the months Sam. and Giam., as does the serial notation of the intercalary months and each series of months following an intercalation. We may infer that there



was a recognised division of the year into two halves, each half beginning with one of these two months. It is also to be noted that the dates of PRINNI are confined to the space from the beginning of the month to the last day of the triduum of full moon.

The notation N INIS R is recurrent at the following 25 dates:

	First half	Atenoux
Sam.	—	8, 9.
Dum.	7, 11	8, 12.
Riv.	5, 11	—
Anag.	5	6, 7, 9.
Ogr.	5	12.
Cut.	5, 9	4, 6.
Giam.	9	7, 9, 11
Sim.	5	—
Equos	—	—
Elem.	10	—
Edr.	—	—
Cant.	—	—

In this distribution, I have been unable to find any system or sequence. Certain things may be noted. In the first half-month, the notation is absent from the first four days and from the last four days. In the *atenoux*, it is absent from the first three days and from the last three days. In other words, it clusters round the times of full moon and new moon, and is excluded from the two alternating times of seven days. Further, within the full moon group, it is absent from day 8, which is the mean date of full moon; and within the new-moon group it is absent from day 10, the mean date of the new moon's first visibility. Taken along with other features, this notation seems to suggest that the Calendar may have belonged not only to a lunar system of chronography but also to the cult of a lunar deity. Except for Elem. 10, in the first half-month the notation is confined to odd-numbered days. The notation is never found on a day of the same number in both halves of the same month. The distribution according to seasons is most unequal; the six months beginning with Dum. contain 20 of the dates, the other six months contain 5. Like PRINNI, N is nowhere found accompanied by one of the triple-bar signs. All these features are too well marked to be without significance.

In Interc. I Aten. 7, N INIS R, transferred from Anag. Aten. 7, is expanded to NSDS INNIS...TIT... In Interc. I Aten. 8, transferred from Sam. Aten. 8, it becomes NSDS INN... In Interc. II 9, transferred from Giam. 9, it becomes NO....INIS.... In Interc. II Aten. 7 and 8, transferred from Giam. Aten. 7 and 8, it is represented by N alone. We have seen already that N, as counterpart of the notation transferred from ordinary months to fill the dates of the intercalary months, is several times expanded to NSDS. In a transferred notation containing N INIS R, the name of the month indicating the date of origin always comes between N (or NS DS) and the phrase IN(N)IS R. This phrase is therefore not in close syntactical connexion with N (NS DS.).

Interc. II 15 has the notation DS MA. NS RIVR. This is derived from Rivros 15, which, in year 1, has MD....., in year 4 [DS M]AT NS. In the other years the material for this date is wanting. DS, D, may be taken to represent the word for "day", \**dij-*. Since NS, like MAT, MA, M, can either precede or follow DS, it appears to represent an adjective *no....s*; *novios* "new" seems quite inept, and I can only suggest \**noibos* > Irish *nóib* "holy".

Samon. Aten. 2 has, in year 1, MD TRINOSAM SINDIV; in year 2, D TRINVXSAMO; in year 3, lacuna; in year 4, D PRINI SAM SINDI; in year 5, MD PRINO SAMON. I have already noted the notations PRINI, PRINO, here as errors of engraving—the engraver has substituted a frequent word for a rare one. The common measure of these notations is MD TRIN(O)VX SAMON(I) SINDIV "A good day: The *trinoux* of Samonios today". I take *sindiu* to be a contraction, in speech rather than in writing, for \**sindu diju?* "on this day" (Irish *indiu*, *cos-sindiu*). Rhys indentifies the date so noted with the summer solstice, assigned to a conventional lunar date; and I think his identification is justified. He supposes *trinoux* to be an abbreviation of \**trinouxtion*, in which *x* would have its Greek value, and the word to be the equivalent in form and sense of the Latin *trinocitium*. I take *trin(o)ux*, like *alenoux*, to be a complete word, formed like *τρίπους*, *quadrupes*, Irish *trelia* "a group of three standingstones", etc. SINDIV has the force of *nota bene*, drawing special attention to the notation; so also at Giam. III 9, Sim. IV 9, Elem. I 10, Edrin. II 10, IV 10, V 10, where SINDIV emphasises the unusual

position of IVOS. It is possible that instead of SAMON(I) we should read SAMON(IA), and translate "the summer *trinux*". Rhys's conjecture that *trinux* implied the notion of the sun standing still for more than one day is corroborated by Dr. Fotheringham who shows from Columella that the Romans dated the solstice on two or three successive days. I take the view, however, that, just as the variation of a day in the length of the months caused three days to be assigned in each month to the times of full moon and new moon, so the variation of a day or two in the length of the solar year required more than one day to be assigned to the solstice. It is not necessary to suppose that *trinux* covers more than one date; the name might be retained though the date had been reduced to a single day. Rhys points out the difference between this conventional date for the summer solstice, the 17th day of Samonios, and its date in our calendars, June 22. "Caesar's calendar", writes Dr. Fotheringham, "appears to have dated . . . the solstice on June 24". The difference in each case is very nearly that between a month commencing with new moon and a month commencing with the 6th day of the moon's visibility.

A fixed date for the solstice or for any other solar event could be only conventional in a lunar calendar. If the date and the event coincided in any year, they would be separated by about 11 days in the following year. The identification of this date is important, for it enables us to fix the standard year to which the years of the Calendar were adjusted by intercalations. In the standard year, Samonios began about five days later than our June 1.

The midsummer festival must have been one of great importance in Celtic tradition. In Christian times, it became identified with the feast of St. John the Baptist, June 24, but its traditional celebration has remained distinct down to our own time. The celebration begins, not on June 24, but according to Celtic custom, at sunset on the day before. I can recal an occasion when, some thirty years ago, from the Middle Island of Aran, on St. John's Eve, I saw about 50 miles of coastline lighted up with fires.

One naturally turns to the opposite point of the Calendar to see whether any notice is taken of the winter solstice, though it be a date of less importance. Giam. Aten. 2 has the recurrent notation NS DS.



The same notation, NS DS, is recurrent on the last day of Dumann(ios). In the standard year, this day, the 42nd after the summer solstice, would correspond to our August 2nd. Here NS DS seems to mark a Gaulish festival, the equivalent of the ancient Irish festival of Lughnasadh, conventionally associated with August 1.

Exactly three months earlier—or, as Rhys would have reckoned it, nine months later—in the Calendar, we find N as the recurrent notation of the last day of Edrin(ios). Instead of N, Rhys reads D in year 1. The photograph shows that the metal is defaced at this place, but it gives the appearance of a D originally engraved and afterwards changed to NS, and there are also apparent traces of lettering in the preceding space; so that I think DS NS may have been substituted for a D engraved first by mistake. In Irish tradition, the festival of Beltaine precedes Lughnasadh by just three months. We have already seen that N and NS DS are interchangeable.

Rhys remarks on the absence of any notation that would indicate a festival corresponding to the Irish Samain at the beginning of winter. There is also no indication of a festival corresponding to the Irish Oimelg, the “ewe-milking”, at the beginning of spring.

The various employments of N or NS DS are such as to lead us to think that this notation was of superior order to the normal D and MD of ordinary days. In particular, it has been noted that the notation of Rivros 15, found also by transference at Interc. II 15, adds NS to DS MA, [DS M]AT, = MD or DM. In the intercalary months, where days 7, 8, and 9 of each half-month have each a twofold notation, derived from two distinct dates, <sup>8</sup>/<sub>16</sub> D and MD yield the place to N or NS DS. Hence one may infer that N or NS DS indicates a day of greater festal or ritual importance than the days marked MD or D. During a period of  $4\frac{1}{2}$  months, from Simiv. 5 to Cant. Aten. 4, N INIS R is found only once in each year, at Elem. 10. In the remaining  $7\frac{1}{2}$  months, it is found 24 times. If we divide the year into thirds, then in the four months beginning with the full moon or the middle of Simivisonn., N INIS R occurs once; in the next four months, 10 times; in the four months beginning with or after the full moon of Anagantios, 14 times. The first four months make up the late winter and the spring, the season of rural scarcity; the last four months, the season of abundance. Thus it

may well have been that N INIS R marked festal days depending for their celebration on the influx of dues or offerings from an agricultural community.

TIOCOBREXTIO (TIOCOBREXT, TIOCOB, TIOCBR) is a recurrent notation at the following dates:

Sim. 7 (thence by intercalary displacement at Giam. III 7);

Edrin. 8 (inferred from Elem. III 8, which has its notation by intercalary displacement);

Cantlos 15, and probably derived thence in the serial notation of Interc. I Aten. 15 (see note thereon in Appendix II).

It will be noted that the dates are confined to a space of five successive months, the same in which the entries of N INIS R are fewest. Rhys regards the word as compounded of *tio-* (< *tego-* or *tegeo-*) *cob-* (= *com*) *recht-*, and renders it by "house-legislation", understanding thereby some formal regulation of the affairs of the temple.

The month Rivros is conspicuous for the various notations peculiar to it. These begin with Rivros 4, which has in year 1 .... OMV RIVO, in year 2 .... G RIVROS, in year 3 MD BRIG RIV, in year 4 .... IG RIVRI, in year 5 .... TIO RIVRO. The notation in year 1 is expanded by Rhys to [...OCI]OMV RIVO, based on the notation of Anag. 4, discussed below. This would imply transference from Anag. 4 by intercalary displacement, which would take place if the notation contained IVOS, not otherwise at this date, at least according to any ascertained rule. We might suppose RIVO, as at Rivros I 13, to represent *ro* + *ivos*, and thus to be subject to intercalary displacement; but against this the notation of Anag. 4 is OCIOM RIVRI, OCIOMV RIVRI; and moreover, if intercalary displacement were operative at this date, it should have the same effect in year 4 as in year 1, whereas in year 4 no displacement is found either at Rivros 4 or at Anag. 4. The probability therefore is that ...OMV, BRIG, and ...TIO belong to the same notation, or indicate the same function by different words. On the other hand, it is quite possible that the office of an important date, recurrent for most years, was varied at certain intervals—say, once in every five years.

With BRIG ...TIO, I can only compare the Irish verb *brig*: *brigit* *i. foillsighit* "they make manifest", *brighter* *i. ráitir nó*

*brithemnaigter* "which are said or which are judged", *brigther .i. airmitnigther* "which is revered"—see Meyer, Contribb.—to which add *brigter .i. firenaigter* ALI III 538 ll. 15, 17. The notation may indicate the solemn announcement and beginning of a festal time, Rivros, beginning four days later and ending four days later than the calendar month called Rivros, and perhaps representing a Rivros of "old style". At Anag. 4, instead of OCIOMV, I would read OGIOMV—in the photographs C and G, even under a magnifying glass, are often quite indistinguishable—and I would regard this as a noun of action corresponding to a verb *\*ōgi* "fulfil, complete", Irish *ōgim*, *uagim*, *con-ōigset*. OGIOMV RIVRI would thus mean "the completion of the Rivros season". The ending *-omu* is also found in DIVERTOMV and in Irish *snám*, *sním*, *gním*, *fuillem* (< *\*vo-sli-omu*: the plural *fuillema* in *Bretha im Fuillema Gell*, title of a lawtract in ALI V indicates two earlier syllables between *l* and *m*).

Rivros 13 has in year 1 DEVO RIVO RIVR[1], in year 2 [D]M IVG RIV ..., in year 4 .... IV. G. RIVRI. Within the V of DEVO a smaller V is engraved, and Rhys reads DEVVO, needlessly, as I think. With Thurneysen I take *devorivo(s)* to be one word compounded of *devo-* "god" and *rivos* < *ro* + *ivos* "great feast". The date corresponds to August 16. Though within the period affected by intercalary displacement, this notation is not displaced. Nevertheless it yields to the preceding month, Dum. I 13, so much as is implied in the word IVOS, thus justifying Thurneysen's etymology of RIVO. Evidently there was a normally recurrent *ivos* at Rivros 13, expressed by IVG in year 2, IV. G., in year 4, with the addition of a word abbreviated to G, about which conjecture is unprofitable. Possibly at Rivros I 13, as at Rivros I 4, we may understand a festival which rose to high importance once in so many years.

IVOS is found at Rivros Aten. 3 and 5, in no other month at these dates.

Rivros Aten. 8 has in year 2 .... [P]ETIVX ANAG, in year 3 D PETI RIVRI ANAG, in year 5 .... [R]IVRI ANAG. Whatever PETIVX may mean, we may understand from D and ANAG that a function regarded as originally proper to Anagantios has been transferred to Rivros at this date; and, since intercalary displacement does not operate at this point in any one of the three years for



which the material of this date is forthcoming, the transference may be considered permanent—it has no counterpart at Anag. Aten. 8.

Rivos Aten. 10 has in year 2 MD PETIVX RIVRI, in year 3 (as read by Rhys) . . . . IVRI DRIVRI ||† M, in year 5 . . . . IVRI. The material for this date in other years is missing. In the photographs, in year 3, the letters following the lacuna and preceding D appear to be IVX. The letters D and M and the triple-bar sign ||†, no doubt crowded out of their ordinary place, are inserted where the spaces in the notation left room for them; in customary order the reading would be ||† MD PETIVX RIVRI, as in year 2.

Beneath the last date of every 29-day month, is found the word DIVERTOMV, in a variety of spellings, as to which see the Vocabulary, Appendix I.

## V. NON-RECURRENT NOTATIONS

Sam. 3 has in year 1 D EXINGIDVM IVOS, in year 2 [D] DVM IVO, in year 3 . . . . MELE IVO, lacunae in years 4 and 5. D DVM instead of MD, shows that this notation is derived by transference from Dumann(ios). I have already shown that Dum. Aten. 2 has MD SAMONI, but that Sam. Aten. 2, where we should ordinarily expect the correlative notation D DVMANNI, is occupied by TRIN VX. On the other hand, Dum. 3 contains nothing corresponding to D DVM of Sam. 3. It is to be inferred that the counterpart of the interchanged notation MD SAMONI of Dum. Aten. 2 is assigned to Sam. 3—though why to that date rather than any other available date in Samonios I cannot guess. EXINGI, not found elsewhere, may have served to point out or explain the anomaly; and . . . . MELE ([DVM] ELE?) in year 3, also not found elsewhere, may have had the same use.

Dum. II 1 has SAMON PRIOVDIXIVOS. L is omitted after PRI. Here, as in various other places, the engraver, probably a semiliterate man, was perhaps confused by the crowded notation of his exemplar. (L)OVDIX may be his transcript of the word which appears as LOVDIN in the foregoing month, Sam. II 7. Rhys proposes to separate PRI[L]OVD from what follows, and to

read IX IVOS as equivalent to EXO IVO. His grammatical account of these phrases and of EXINGIDVM amounts to regarding them as modern Irish.

Anag. III 1 has M[D] RIVRI EXO IVO. Comparison with Rivros I shows that MD RIVRI is an interchanged notation. Giam. V 1 has [MD SI]MIVS EXO IVO, in which MD SIMIVS is likewise an interchanged notation. In both places, IVO(S) is proper to the date at which it is found, and is not derived by interchange; and possibly EXO serves to distinguish the indigenous from the exogenous element.

Anag. V 2 has D GO RIV... where Anag. III 2 has [D] IVOS and Anag. IV 2 has D only (owing to intercalary displacement of IVOS). To judge from Rhys's note, the reading of Anag. V 2 has been difficult. The photographs are not very helpful at this point but seem to suggest IVOS rather than RIV[RI]. There is no correlative notation at Rivros 2.

Equos I 15 has MD SEMIC ANO, Equos IV 15 has MD SIMI; in the other years there are lacunae at this date. The correlative notation is . . .S EQVI in Sim. I 15. D EQVI in Sim. II 15 and Sim. III 15 (lacunae in years 4 and 5). Here, as at Rivros I 4 and 13, there may be a notation recurrent at longer periods than a year.

Cantlos I Aten. 14 has D IVO DIB CANT, as against D IVO in year 5. For the possible significance of DIB CANT at this date, see Vocabulary.

Certain words or fragments of words in the intercalary months, and notably the entries at the end of Interc. I and at the beginning of Interc. II, are, so far as the material goes, *ἀπαξ λεγόμενα*. The notation of these months is in the main peculiar to themselves. In the ordinary months, when the methods of transference are taken into account, with the exception of the non-recurrent items discussed above, the notation repeats itself in successive years, varying only as the words are more or less abbreviated.

There is, however, a kind of notation which is not expressed in letters and which varies very much from year to year—the signs †||, ††, †||, which I call the triple bar signs. In a few instances, only two bars are found. Sometimes the cross-bar is

omitted, and sometimes, instead of two short bars and one long one, there are two long bars and one short one. Though I have not been able to detect any regularity, there are some constant features worth noting in the distribution of these signs.

The triple-bar signs are never found at the first, second, or fifth day of a month, or at the last day of a 30-day month. They are found once only at day 15 (Sam.), and once only at Aten. 1 (Ogr.). In the first half of a month, they are much rarer in the first seven days than in the last seven, the ratio being 4 : 22; they are also rare on day 8. In the *atenoux*, excepting days 1, 2, 3 and 15, their distribution is fairly even. They are much rarer in the first half-month than in the *atenoux*, the ratio being 2 : 5. They are often found at three successive dates, usually in this order: †||, ||†, ||†. They are very seldom found at dates of the same number in both halves of a month. They never accompany the notations N and PRINNI.

Rhys has suggested that these signs were used to mark a division of the day into three parts of different importance, the crossbar indicating whether the most important part came first, second, or third, in a particular day; and Messrs. Nicholson and Fotheringham have made comparison with the Roman *dies intercali* which were *nefasti* in morning and evening but *fasti* in the middle of the day. It may be remarked that, whereas the special terminology of early ecclesiastical usage in Ireland consists almost wholly of Latin loanwords, the canonical hours are named by an Irish word *tráth* (a neuter u-stem < \**trālu*), a fairly certain indication that some subdivision so named of the day was known to the older heathen tradition.

## VI. CHRONOGRAPHY OF THE CALENDAR

The recurrent character of the notation shows clearly that the Calendar of Coligny was intended for a permanent timetable, not for the timetable of a particular set of five years. To this intent also, it was engraved on a tablet of bronze which was rivetted to a frame of bronze, bronze being the material used for the most permanent records.



This leads to the inference that the tablet, even if it were preserved complete, would not contain the complete Calendar. Reckoning by whole days,

$$62 \text{ lunar months} = 1831 \text{ days}$$

$$5 \text{ solar years} = 1826 \text{ days.}$$

Thus the use of the tablet as a complete recurrent calendar would lead to an accumulating divergence of 5 days in every five years, and the purpose of intercalation, to prevent an accumulating divergence, would be defeated. We shall see that there are other grounds for thinking that the quinquennium of the extant fragments formed only part of the whole Calendar.

Dr. Fotheringham pointed out that "the Calendar .... as *reconstructed* [by Sir John Rhys] .... contains 62 months, including 1835 days, whereas 62 lunar months ought to contain only 1830·9 days. There is thus an error [in lunar reckoning alone] of 4·1 days in 5 years." The divergence from solar time would be about 9 days in 5 years. In one generation, the conventional solar dates, of which four have been indicated, would be two months astray.

In the reconstruction by Rhys, each month contains the same number of days in all the years. If the Calendar were to work with approximate accuracy, Dr. Fotheringham showed, one of the months must have been of variable length, and he further showed that the only month that would accord with the condition was Equos. Equos has 30 days in years 1 and 5. In the other three years, the end of this month is missing, and in these years Dr. Fotheringham supposed Equos to have only 29 days. This, he pointed out, would explain why, alone among the months that have 30 days, Equos was a "not-good" month and its days were not "good" days—being most frequently a 29-day month, it was classed with the other 29-day months. The error, on this hypothesis, would be reduced, so far as the lunar reckoning is concerned, from 4 days to 1 day. Dr. Fotheringham also pointed out that Equos coincided with the variable month of the Roman calendar, February. His reasoning seemed almost demonstration, until Dr. Orpen showed that, by the explicit evidence of the Calendar itself, the year containing the second intercalary month consisted of 385 days, and therefore that Equos in that year, as in years 1

and 5, must have contained 30 days. Dr. Fotheringham admitted that this evidence was fatal to his hypothesis of a 29-day Equos.

It was not, however, necessarily fatal to his argument,<sup>1</sup> which in Dr. Fotheringham's own words, was the alternative to supposing that "the Calendar must *either* be a quondam lunar calendar which had been allowed to become independent of the Moon, like the Calendar of the Roman Republic, or some crude and ignorant attempt at a lunar calendar." According to Pliny's testimony, the druidical months and years were strictly lunar, and, as I have shown, the Coligny Calendar is in remarkable accord with Pliny's testimony. The careful and complex structure of the Calendar does not bespeak an ignorant and crude attempt. We recal what Caesar says of the Druids: *Multa praeterea de sideribus atque eorum motu, de mundi ac terrarum magnitudine, de rerum natura, disputant et iuuentuti tradunt.* The mechanical apparatus of this Calendar was borrowed from Greek culture. It seemed to me most unlikely that a fact of chronography so easily grasped as the Metonic equation, 235 lunar months = 19 solar years, would have been unknown to Gallic teachers of astronomy and contrivers of an elaborate intercalated chronography, or, if known to them, that it would have left them content with a calendar gravely defective both in lunar reckoning and in soli-lunar adjustment.

Hence, I reasoned, Dr. Fotheringham's argument deserves to be pushed to a rigorous conclusion, and any rational alternative to his hypothesis deserves to be tested. The only rational alternative that offered was that Equos, which contains 30 days in years 1, 3, and 5, contained only 28 days in years 2 and 4. This hypothesis has the recommendation that it gives the correct total of 1831 days for the 62 lunar months.

I further argued that an Equos varying between 28 and 30 days was likely to be of learned device, and to have replaced the 29-day month of an older reckoning in which, as among the Greeks, the lunar year was made up of months of 29 and 30 days, based on an average lunar month of 29½ days. Such a learned device ought to result in apparent displacements analogous to the

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<sup>1</sup> Rather the contrary. The statement of the number of days in a particular year does not imply that the number was invariable; and even though the particular year includes an intercalary month, the addition of 30 days to a fixed number would not necessitate such a statement.

displacements which I had found to result from intercalation. The kind of displacement to be expected was this: In years 1, 3, and 5, the traditional "not-good" Equos of 29 days ought to borrow a day from the beginning of the following month, and in years 2 and 4 the following month ought to borrow a day from the end of Equos.

For year 3, no verification from the end of Equos and the beginning of Elembiv(ios) is possible, the material not being forthcoming. In year 5, the five last dates of Equos have the notation IVO(S). If IVOS were proper to these five dates, then it should be found by intercalary displacement at the corresponding five dates of the preceding month, Simivisonn., in years 1 and 3. Year 3 has a lacuna here, but in year 1, *the last four dates only* of Simivisonn. have IVOS. This accords with the hypothesis that Equos was traditionally a 29-day month, artificially lengthened to 30 days in year 5.

If this argument is sound, IVOS of Equos 30 should be borrowed from the beginning of the following month Elembiv(ios). For the beginning of Elembiv(ios) our evidence is complete only in year 2, but here, *ex hypothesi*, a 28-day Equos precedes. The first five days of Elemb. II have IVOS. If the argument holds, four only of these entries are proper to this month, and the fifth is borrowed from the shortened Equos. We turn accordingly to Equos I which, by intercalary displacement, should contain the entries of IVOS normally proper to Elemb., and we find there IVOS at *the first four dates only*.

Again, Elemb. II 6 has D AMB, a notation proper only to oddnumbered days and, in the first half of a month, only to days 5 and 11. Rhys, in his Notes, says: "Here the engraver has apparently placed AMB in the wrong line, and left it uncorrected. It should have been in the previous line as duly pointed out by Commandant Espérandieu." The two lines read

V D IVOS  
VI D AMB

AMB being beneath the space between D and IVOS. This cannot be a slip of the engraver instead of

V D AMB IVOS  
VI D



Even if we suppose AMB and IVOS to have been engraved in two separate operations, it is evident that the position of one would have been a guide for the placing of the other. I suggest that AMB has been intentionally displaced owing to one day having been taken over, as I have shown, from the end of Equos.

Thus an hypothesis based on purely *a priori* grounds receives notable confirmation, and the soundness of Dr. Fotheringham's anticipation and argument is fully demonstrated. In the defective state of the material, we could expect no more complete proof that Equos in the five years respectively contained 30, 28, 30, 28, and 30 days, and that the 62 months contained the correct total of 1831 days.

It is all the more probable that the intercalations of the Calendar were based on an approximately accurate solar reckoning. I have already argued that the Metonic cycle of 19 years with seven intercalations is likely to have been known to the Druids of Gaul. There is no inherent reason why the extant quinquennium of the Coligny Calendar may not have formed part of such a cycle. On the other hand, I am not certain how the last clause of the passage quoted above from Pliny is to be interpreted. If it means that the sixth day or night of the moon formed the beginning "of a cycle (*saeculi*) after (each) thirtieth year," then Pliny's evidence is that the Druids arranged their soli-lunar chronography in cycles of 30 years.

Such an arrangement was quite possible, though it would have given a less closely accurate result than the 19-year cycle. The 30-year cycle would contain 11 intercalations. The equation is

$$(30 \times 12 + 11 =) 371 \text{ lunar months} = 10,956\frac{1}{2} \text{ days}$$

$$30 \text{ Julian years} = 10,957\frac{1}{2} \text{ days.}$$

The divergence is 1 day in 30 years, and the Calendar could remain in use for three centuries before its reckoning would go farther astray than the reckoning of the Julian Calendar at the time of the Gregorian reform. The 19-year cycle was anciently regarded as divisible into an *ogdoas* and a *hendekas*, a subcycle of 8 years with 3 intercalations and a subcycle of 11 years with 4 intercalations, each by itself allowing a divergence of about 1 day. In the 19-year cycle, the divergence amounted only to about 1 day in three centuries. The 30-year cycle could be regarded as a combination of this with the *hendekas* (19 + 11). The fact that 30 years is a multiple of 5, the number which the tablet of

the extant fragments was arranged to contain, is at least in accord with the use of a 30-year cycle, and with the probability, greater or less, that this tablet was one of six which formed the complete Calendar. Against this, the assumption that the tablet begins with the beginning of a year and ends with the end of a year cannot be said to rest securely on the evidence of its contents.

The complete tablet, beyond doubt, contained the series of 12 months five times repeated, and the first series begins with Samonios. But the five times repeated series, we have seen, is also found in the diurnal notation of the two intercalary months, and in the first of these it begins, not with Samonios but with Giamonios. The counternotation N or NS DS has been shown to run seriatim through the months and days, being found at the first day of the first month, the second day of the second month, and so on; but there again the series begins both at Giamonios and at Samonios. Also the two cycles of dates at which PRINNI is found begin, one with Samonios, the other with Giamonios. At no point in the Calendar is there any apparent indication of the ending of a year. We have the clearest indication of a division of the year into two recognised halves, one beginning with Samonios, the other with Giamonios. Intercalation takes place at the beginning of each half. But what is there to decide at which point the authors of the Calendar held their year to begin? When we have once perceived that the tablet forms part of a larger chronographic scheme, the assumption that it begins with the beginning of a year becomes no more than an assumption.

In fact, the only explicit evidence that the Calendar affords is distinctly in favour of Giamonios as the beginning of the year. That evidence is found in the sum of months and days—M XIII LAT. CCCLXXXV—at the head of column 9. The statement is followed by the second intercalary month, and the next ordinary month is Giamonios. We expect to find a statement of the kind at the beginning or end of a year rather than in the middle of one.

Rhys, taking it for granted that the tablet in its complete state contained the whole of the Calendar and consequently that the calendar year began with Samonios, was at much pains to explain its so beginning. He held that the ancient Celtic year began with the first month of winter, named Cutios in the Calendar; that later there was a change to the first month of summer, named

Cantlos; and that finally Cantlos, being an "unlucky" month, gave way to Samonios, a "lucky" month. (In passing, I give my view that "unlucky", though in form a merely negative term, is perhaps too strong an interpretation of *anm(atu)s*). Correlative to the "good" months are the "good days", to the "not-good months" the "days" (D) without qualification. It is not likely that these last, by far the majority in each year, were held to be days of bad luck or bad omen, such as would be called "unlucky" in English.)

It seems nowise improbable, indeed, that the "*natio Gallorum admodum dedita religionibus*" would like every year to begin "good", but there is another side to the argument; for the first day of Samonios is not a "good day" and the first day of Giamonios is a "good day". In each case the character of the day is regulated by transference, which must have been of hieratic contrivance, and it seems much more likely that the year began with a day which was contrived to be "good" than with a day which was contrived not to be "good".

The Greeks, in their 19-year cycle, made intercalations at intervals some of 2 and some of 3 years; the Babylonians used intervals of  $2\frac{1}{2}$  and 3 years, allowing a more equable distribution. The one interval in the Coligny Calendar is of  $2\frac{1}{2}$  years, and this makes probable a combination of  $2\frac{1}{2}$ -year and 3-year intervals as in the Babylonian system; for if we suppose a 19-year cycle with 6 intervals of  $2\frac{1}{2}$  years, the seventh interval would be of 4 years, which would permit a needlessly great and inconvenient divergence between lunar and solar dating. In a 30-year cycle with 11 intercalations, 10 intervals of  $2\frac{1}{2}$  years would leave an eleventh interval of 5 years, allowing a very excessive divergence. There is however more than antecedent probability in favour of intervals of  $2\frac{1}{2}$  and 3 years in the Coligny Calendar.

We have seen that the Calendar shows two series of 12 months, one beginning with Samonios, the other with Giamonios. In the intercalary month which precedes Samonios, the diurnal notation starts from Giamonios, and conversely, in the intercalary month which precedes Giamonios, the diurnal notation starts from Samonios. An easy calculation will show that, if all the intervals were of 30 months, this see-saw arrangement would be perpetual. If, however, we take the interval preceding the one in the Calendar to have been of 36 months, we shall find that the two series coincide: Samonios will begin the diurnal notation of the preceding



intercalary month and will also begin the series of months that follows it. In like manner, if we place an intercalary month 36 months later than the second intercalation in the Calendar, we shall find that the beginnings of the two series coincide in Giamonios. At whichever point the year began, it is reasonable to suppose that each series began at that point, and this supposition implies an interval of 3 years beside the attested interval of  $2\frac{1}{2}$  years. It also implies a larger Calendar of which the tablet in evidence formed only a section.

To sum up: There is evidence that the extant fragments belong to a section of a larger Calendar containing a cycle, probably either a Greek cycle of 19 years or a druidical cycle of 30 years. The lunar reckoning was regulated by making the lunar year consist of 6 months of 30 days, 5 months of 29 days, and one variable month of 28 or 30 days. These years were adjusted to the solar year by means of intercalary months of 30 days introduced at intervals of  $2\frac{1}{2}$  and 3 years.

If the 19-year cycle was adopted, as I think most likely, it would contain, apart from 7 intercalary months of 30 days, 11 years of 355 days, 7 years of 353 days, and one year of 354 days in which Equos would have the traditional content of 29 days. This gives a total of 6,940 days, differing by  $\frac{1}{4}$  day from 19 average Julian years.

## VII. VOCABULARY

AMB. This word, of which no more extended form is instanced, is part of the notation D. AMB. which may be said to be normal at the days 5 and 11 of each month, and at days 3, 5, 7, 9, 11, 13, and 15 (i. e. all the oddnumbered days except day 1) of the second half (the *atenoux*) of each month. It is found at no other days, except once, namely at Elemb. II 6, where its position, instead of at the preceding day, is to be ascribed to a special displacement (see p. 29). There is one instance of N AMB, in Dumann. III Aten. 11. The place of D AMB is sometimes taken by PRINNI, sometimes by N INIS R. The expansion of AMB to *ambachlos* by Rhys is gratuitous. The complete word may be a compound of *ambi* (Irish *imb*, *imm*), or of the negative prefix *an-* with a component beginning with *b* (cp. Irish *am-béo* "lifeless", *aimbrit* "barren"—*birit* < *\*berenti* "a brood sow"—, *ambue* "having

no goods", lit. "kineless", etc.). A negative sense would suit well the use of this notation. In five instances, Interc. I Aten. 3, 5, and 15, Interc. II Aten. 9, and Samon. I 5, we find [A]MB RIVR, AMB RIV, [A]MB RIX, AMB RIVR; AMB RIXRI. All occur in those parts of the Calendar which show least abbreviation. They seem to be more extended forms of AMB itself. They have no apparent connexion with the month Rivros; and it may well be that RIX. is authentic, and that RIV, RIVR, are errors of the engraver through substitution of a familiar for an unfamiliar abbreviation.

AMMAN. M. MXIII ... LAT. CCCLXXXV in the heading prefixed to Interc. II. The meaning may be: "Times [i e. the content in time of the year which follows] ... months 13, days 385". Cp. Irish *amm*, dat. *ammaimm* "a time".

ANAGANTIOS. The fullest forms found are ANAGANTIO and ANAGTIOS. Other abbreviations ANAGANT, ANAGAN, ANAG, once AN (Interc. II 4). Probably a participial formation from the verb *anag-*, Irish *anag-* "save", *ad-anag-* "bury", *ind-anag-*, *to-ind-anag* "bestow, escort". The meaning then would be "the time for saving or stowing away the harvest". It is the name of the month corresponding more or less to September.

ANM[ATVS], "not good", negative of MATV(S) "good". In the headings of tables of the months, the name of every month of 30 days except Equos is followed by MAT, and the name of every month of 29 days, and also of Equos, is followed by ANM. In the table of each month marked MAT, except the days marked D AMB (see under AMB) and a small number of days having special notations, each day has the notation MAT D or DS MAT, usually abbreviated to MD or DM; but in the months marked ANM, the notation is simply D. When the notation of any date is transferred from one month to another, it retains the MD or D of the date of origin.

ANTARAN. "intercalary?" Cp. Irish *elar-*. It appears to be the name, in abbreviation, of the second intercalary month [MID] ANTARAN M(AT).

..ANTIA. In the notation which follows the last day of the first intercalary month.

ATENOVX "afternight". The second half of each month, containing 15 or 14 days, according as the month contains 30 or 29 days. The time of dark nights, corresponding to the fourth

and first quarters of the moon. The photograph seems to show ATINOVX in a number of instances, but Rhys reads ATENOVX throughout.

BRIG..TIO. Rivos II 4, ...G RIVROS; Rivos III 4, MD BRIG RIV; Rivos IV 4, ...IG RIVRI; Rivos V 4, ...TIO RIVRO. See pp. 22, 23.

BuIS. In CIALLOS BuIS (one word?), in the heading which precedes the second intercalary month.

CANTLOS, genitive CANTLI. Abbreviated CANTL, CANT. "The song-month". Gaulish *cantalon*, Irish *cétal*. Corresponding more or less to May, a time of rejoicing at the arrival of the season of warmth, beauty, and plenty.

CANO. Equos I 15 has M D SEMIC ANO, in which SEMI is an abbreviation of the month-name Simivissonn-.

..CARIEDIT In the notation following the last day of the first intercalary month.

CINGOS. See SONNO CINGOS.

CVTIOS, genitive (?) QVTI. Abbreviations: CVT, QVT. Beginning with Interc. II, in the middle of the tablet, Q regularly replaces C as initial, except in the heading of Cutios V—the headings of months were probably all engraved before the diurnal notations were filled in. The month corresponds more or less to November.

CIALLOS: in the heading which precedes the second intercalary month, CIALLOS B[V]IS SONNO CINGOS. Taking *sonnocingos* to mean "sun-march" i. e. "year", *ciallos* would appear to be a term designating the particular year or rather class of year to which the heading belongs. M. Joseph Loth has found in *ciallos* the root *kei*, *ki*, having the meaning *rassembler*, and has given as his belief that *ciallos* may signify *rassemblement*, *résumé*, connecting this meaning with "the fact that the intercalary month collects the intercalary days" (epacts) of  $21\frac{1}{2}$  years. My analysis shows a different view of the notation of the intercalary months from that which is the foundation of the argument of M. Loth (*L'Année Celtique*, p. 7). Since *sonnocingos* is nominative and comes after *ciallos*, it is not easy to see that *ciallos* particularly describes or refers to the month which comes after. Moreover the element *-allos* requires to be accounted for by etymology or analogy. After much scrutiny, the only explanation of *ciallos* that has seemed to me possible has been that which I now offer. The word is a



compound, possibly technical: *ad hoc* and somewhat artificial, of the two words *ci* and *allo-*. In the sense of "on the other side, belonging to the other side", *allo-* is familiar: Gaulish *Allobroges* (for *\*Allomroges*, "the people beyond the march or border" = Irish *mruig* < *\*mrogi*); Irish *allmuir*, *allmarach*, "belonging to a county beyond the sea", *t-all*, *a n-all*, *alltar* etc. *Ci* is found in the Ogham word XOI, XI, Old Irish *in bith ce*, *in domun ce*, "the hither-world, the present world" in contrast to *in bith* (or *in betha*) *thall* "the world beyond"; also in Latin *cis*, *citra*: *bethath che .i. in domuin chentar*[aig?]; *ocum imdegail ar amainsib in chentair ocus ar phéin in alltair* "protecting me from the wiles of this world and from the punishment of the other" (Windisch, Wörterbuch, s. vv. *ce* and *amainse*). *centar* < *ci-no-tero*; *alltar* < *allo-tero*. In the Irish genealogies, when the same name occurs at different parts of a pedigree, the earlier name is described by *alltarach*, the later by *cennlarach*. In modern Irish, *ceanntar* has developed the meaning of "district" from that of "this side"; a converse but analogous development is found in the French *contrée* (whence English *country*), properly "opposite side". Irish *cendaid* "tame", *céndais*, *cénais* "mansuetus", and *allaid* "wild", show the same antithesis of *ci-no-* and *allo-*. In my interpretation, *ciallos sonnociingos* would mean "a year of this side and that", that is to say, "a year in which the notation and ritual observance of each month belongs in part to the month itself but in large part also to another month" such in fact being the character of the notation throughout the twelve months which follow this heading. I can offer no suggestion as to the intervening word *b(u)is*.

D., see DS. D.... is also found, apparently as a heading to the tablet, above Interc. I.

DEVO RIVO, Rivros I 13. For *\*devorivos* "great feast of the god or gods". For the separation of the components, compare SONNO CINGOS. See IVOS.

DIB. In Cantlos I Aten. 14: D IVO DIB CANT. DIB may represent a word (genitive?) meaning "end". Cp. Irish *dibath*, *dibad*, "extinction of lineage, property left by a man who has died without issue". The notation then would mean "the last *ivos* of Cantlos".

DIVERT(I)OMV Dum. I; DIVERTOMV Giam. I, Elemb. I, Cantlos I, Dum. II; DIVORTOMV Anag. II, Giam. II, Dum. III; DIVIRTOMV Anag. IV; DIVERTOMV Giam. IV; DIVIRTOMV

Dum. V; DIVERTOMV Elemb. V, Cantlos V. I give the instances in their actual sequence, to illustrate the manner of the changes in spelling. In Dum. I, the upper limb of T on the right has beneath it a score which Rhys reads as I. I take the word to be a noun of action formed from a verb *\*di-vert-*. Cp. Irish *do:fort-*, *dórt-* "pour, spill", which, as to development of meaning, Pedersen compares to French *verser*. The word is found beneath the table of every 29-day month where the material is forthcoming. As these months are "not-good", *divertomu* may have a deprecatory sense, intended to avert a bad omen, or, if the meaning be closer to the Irish word, it may indicate a ceremonial act to the same intent. For the ending *-omu*, cp. Irish *gním*, *sním*, *snám*, *fuillem*, *cocnam*.

DS. For *\*dij* . . . s "day". In DS MA. NS., Interc. II 15 and the frequent NS DS. Usually D. See SINDIV and NS DS.

DVMANN-, genitive DVMANNI. Abbreviations: DVMANN, DVMAN, DVMN, DVM. Rhys supposes nominative *\*Dumannios*, but so far as the material indicates, *\*Dumannos* is equally possible. It is the name of the month corresponding more or less to July. I can only suggest a comparison with Irish *domnae*, *damnae*, "material", perhaps primarily or chiefly in the sense of "building material" or "textile stuff", my notion being that the slack time before harvest was found appropriate for the work of building or weaving.

EDRIN(IO)S, genitive EDRINI. The final S is found in the heading of Edrin. II. The spelling AEDRINI is found in Interc. II Aten. 8, Cantlos III 1, and Cantlos IV 1, AEDRIN Cantlos I 1. Wherever the text is decisive, the names of months in the headings are always nominative, though preceded by MID or M = "month"; see Rivros II, III, V, Anag. III, Cutios V, Equos I, II, III, IV, V, Cantlos I, II, III, IV, V. Hence in Edrin I and V, EDRINI would seem to be an abbreviation of nominative *\*Edrinios*.

EDVTIO . . . Interc. I 9, ED . . . Interc. I Aten. 9.

ELEMBIV . . . ELEMBI. ELEMB. ELEM. No more expanded form is found, but ELEMBI Interc. III 7, Equos I 7, 8, 9, Edrin. IV Aten. 1, 2, may show the genitive ending. It is the name of the month corresponding more or less to March. I venture to regard it as insular-Celtic of druidical introduction, < *\*elu* > Irish *il-* and *\*embivion* > Irish *imbe* "a wooden fence, the act of fencing with wooden materials", verb *imm-fen*, root *vi*. With masculine ending

as in *Cantlos*, \**Elembivios* would thus mean "the month of many fences", the time when fences were made or repaired to exclude from tilled fields the cattle which had been allowed to range over them after the ingathering of the crops. For \**ambi*-, Gaulish has *ambi-*.

EQVOS, genitive EQVI. "Horse-month", the name of the month corresponding more or less to February. Rhys makes comparison with the Roman festival Equiria, celebrated with horseracing on the second last day of February and the 14th March. Since P replaces Q in Gaulish, Rhys supposes a "Sequanian" form of Celtic which retains Q, but, in view of PRINNI and POGDEDORTONIN, he supposes this dialect to have also retained Indo-European P, unlike all other known forms of Celtic speech. I suggest that this name, as well as \**Elembivios*, was of insular and druidical origin. It should be borne in mind that proper names for months must have originated in a regulated solar-lunar calendar in which each month was fixed within limits in relation to solar time. There do not appear to have been any names of months in Celtic or Germanic popular tradition. The naming of months, like the regulation of the calendar, belonged to historical science, and there is no reason to suppose that the month-names in the Coligny Calendar had any long history behind them.

EXINGI. In the notation D EXINGIDVM IVOS, Samon. 13, where DVM appears to represent the month-name Duramn-. Cp. EXO, also associated with IVOS.

EXO. In the notations M[D] KIVRI EXO IVO, Anag III, and [MD SU]MIVS EXO IV[O], Giam. V 1. In each instance, EXINGI and EXO are part of notations in which IVOS is associated with the transferred name of a month.

G. In the notation ...M IVG RIV...., Rivros II 13, and ....IV. G. RIVRI, Rivros IV 13.

GIAMONI[OS], genitive GIAMONI. The nominative is inferred from the headings [GIAMONI and [GIAMOM for GIAMONI. "Winter-month", the month of the winter solstice, corresponding more or less to December. Abbreviations: GIAMONI (probably genitive) GIAMON, GIAMO, GIAM, GIA.

GO. In Anag. V 2, D GO RIV....

IN. The preposition = "in": Interc. II Aten. 2, MD QVTI IN OGRO = "a good day of Cutios in Ogronios", meaning *ma-*





< \**mins*. There was apparently a lispingsibilant in Gaulish, arising from various dental groups, and expressed variously by *d*, *ds*, *ss*, *s*, *θ*, *θθ*, *ð*, *ðð*, etc. See Holder, *Alt. Spr.*, s. v. *D*. Cp. Irish *bb*, *dd*, *gg* < *ssb*, *ssd*, *ssg*, in *epir*, *conutaing*, *uccu*, etc. beside *acair* (*gg* < *ðg*) etc.

MV... In Interc. I 9.

N. The ultimate abbreviation of NS DS, NO... at Interc. II 9. Followed at certain dates by IN(N)IS R. Found also at dates from which the days of the intercalary months derive their notation. Quite exceptional in PRINN. N. LAG, Canilos V 4.

NE... In Interc. I 7.

NO... In Interc. II 9. See under N.

-NOVX, -NVX, in ATENOVX, TRIN VX, TRINO(VX). "Night". Welsh *nos*, Irish *in-nocht*.

NS DS. The transferred notation of Interc. I Aten. 7 (derived from Anag. Aten. 7), Interc. I Aten. 8 (derived from Samon. Aten. 8), and the parallel of N at Edrin. Aten. 15, marking the end of the spring quarter, and NS DS at Dumann. Aten. 14, marking the end of the summer quarter, show that NS DS is a fuller form of the notation usually abbreviated to N. Interc. II 9 has NO..., followed by INIS [R], derived from Giam. 9, for which the normal notation is found only in transference: N GIAMO INIS R, Cutios I 9. Interc. II 15 has DS MA. NS RIVR, derived from Rivros 15, which has [DS M]AT NS in year IV, but MD.... in year I. There can be little doubt that DS, D represents the word for "day", \**dij*-, and that NO... S, variable in position like MAT., M., is an adjective. *novios* seems unsuitable, and I can only suggest \**noibos* (= Irish *nóib*) whence apparently the personal names *Noebia* and *Noeibio(n)* in Holder's *Alt. Spr.* The indications are that NS DS, N, is a notation of special dignity. It is preferred to MD in the dates of doubly derived notation, Interc. I 7, Interc. I Aten. 8 and 9. For the distribution of N, NS DS, with and without INIS R, see pp. 10, 11, 18, 19.

OCIOMV. In MD OCIOMV RIVRI, Anag. IV 4 and V 4; thence by transference, [OCIOM]V RIVRI AN, Interc. II 4. Perhaps also ... OMV RIVO, Rivros I 4. I would read OGIOMV,—C and G being often indistinguishable in the photographs,—and regard the word as a noun of action corresponding to a verb \**agi* "fulfil, complete", Irish *ógim*, *uagim*.

OGRONI(OS), genitive OGRONI. Abbreviations: OGRON, OGRO, OGR. In Ogron. IV, the heading has [OG]ROM for OGRONI, like GIAMOM for GIAMONI; and, since the names in headings, so far as ascertained, are nominatives, the full form seems to be \**Ogronios*. "Cool month": \**ogros* > Welsh *oer*, Irish *úar*. Corresponding more or less to October.

OX..ANTIA. In the notation at the end of Interc. I. There is space for one letter in the lacuna.

PETIVX. PETI. In Rivros, Aten. 8 and 10. Perhaps abbreviations of a word having *petru-* "four-" for its first component.

POGDEDORTONIN. In the notation at the end of Interc. I. It may contain several words.

PRINNO, Cutios V 4; PRINO, Equos V 8. Elsewhere PRINNI, PRINI, PRIN, PRI, PR. For the distribution, see LOVDIN and LAGIT. Beside PRINNO, PRINO, it is more likely that PRINNI is genitive singular than, as Rhys supposed, nom. plural. The word is not accompanied by D or MD. In a transferred notation, the name of the month of origin precedes, e. g. EQVI PRINNI LA.

In Samon. IV and V, Aten. 2, PRINI, PRINO, are errors of engraving for TRINV(X), TRINO.

QVIMON. In the notation at the end of Interc. I.

QVTIO. See CVTIOS.

R. In the frequent notation N INIS R. The complete word seems to have contained the syllable ..TIT.. See INNIS.

RIVO. See DEVORIVO and IVOS.

RIVROS, genitive RIVRI. Abbreviations RIVR, RIV, and at Rivros I 4, RIVO. "Great festal month(?)"—see IVOS. Corresponding more or less to August. For AMB RIVR see AMB.

RIX, RIXRI. See AMB.

SAMON(IOS), genitive SAMONI. Abbreviations: SAMON, SAMO, SMO, SAM. "Summer-month", the midsummer month, containing the summer solstice, and corresponding loosely to June.

[SIMIVI]SONNA..., Interc. I 2; SIMIVISONN., Interc. II Aten. 6. Other abbreviations:

SIMIVIS Interc. II 1, Giam. I Aten. 9, Giam. III 8, Giam. III At. 9, Simiv. IV heading, Equos V Aten. 3.

SIMIVI Giam. I Aten. 7, Giam. III 7, Giam. III Aten. 8, Simiv. I heading.

SIMIVISO Giam. I Aten. 8, Equos I 6, Equos II 13, 14.

SIMIVISON Giam. III 1.



SIMI Giam. III Aten. 7, Equos I 3, Equos II 15, Equos IV 13, 14, 15

[SI]MIVS Giam. V 1.

SEMIVIS Equos I 13, 14,<sup>4</sup> Aten. 1, 2.

SIMIV Equos I Aten. 3.

SIMISO Equos I Aten. 6.

SEMIV Equos IV 3, Aten. 1, 2, 3.

The spelling SEM- is confined to Equos, which has also SIM-.

The name may have ended in *-atis* or *-acos*. The month corresponds loosely to January. With *-visonn-*, cp. Old Welsh *guiannuin*, Cornish *guaintoin* "springtime".

SINDIV. Abbreviated SINDI, SIND. I take it to be the trite form of *\*sindu diju?* = "today", Irish *cos-sindiu*, *indiu*. It is used apparently for special emphasis. The instances are: Samon. I Aten. 2, TRINOSAM. SINDIV = Samon. IV Aten. 2, PRINI (for TRINV) SAM SINDI, "the Trinux of Samonios today"; and with IVOS, Giam. III 9, SIND IVOS, = Simiv. IV 9 SINDIV IVOS; Elemb. I 10, SIND IVOS, = Edrin. II 10, SIND IVOS, = Edrin. IV 10, and Edrin. V 10, SINDIV IVO—the place of IVOS at these dates being exceptional.

SONNO CINGOS. In the statement preceding Interc. II. Doubtless a compound, *Sonnecingos*, the separation of the components, as in DEVO RIVO, indicating that there was full consciousness of the separate components, just as in English one may write "head rent" or "headrent". It may be a learned name for "year" = "sun-march".

SV... In Interc. I Aten. 9.

TINAD... In Interc. I 7.

TIOCOBREXTIO(S?). Interc. I Aten. 15 TIOCOB... Giam. III 7 TIOCBR = Simiv. IV 7 TIOCOBREXTIO. Elemb. III 8 TIOCOB. Cantlos I 15 TIOCBR[E]XT Cantlos II 15 [T]IOCOBREXTIO. Cantlos III 15 TIOCOBREXT. In this word X, =  $\chi$ , preserves the tradition of writing Gaulish in Greek characters. Cp. OV in LOVD., ATENOVX, TRINO(VX) beside TRINVX.

TRINVX, Samon. II Aten. 2 = TRINO(VX), Samon. I Aten. 2, PRINI Samon. IV Aten. 2 = PRINO, Samon. V Aten. 2. In Samon. IV and V, the engraver has substituted the more frequent and familiar for the rarer word. The view of Rhys that this word denotes the summer solstice appears just.

Owing to the abbreviated notation, the Calendar is poor in inflexional endings. CARIEDIT seems to be the 3rd person singular of a verb. There are many o-stem nominatives in *-os*, and the shortening to *-o* is likely to represent actual spoken usage; also genitives of these in *-i*. DIVERTOMV and OCIOMV (OGIOMV?) I take to be neuter nominatives, *u*-stems; ATENOVX and TRIN VX nominatives of consonant stem. A large part of the vocabulary, as in Gaulish inscriptions generally, is obscure, and the interpretations that have been offered are mostly conjectural. A great part of the notation conveys no more than an algebraical sense. The material appears to contain in all about 60 distinct words. For about half of this number, we have only abbreviations of which the extended forms are altogether conjectural.

# VIII. A REVISED RECONSTRUCTION OF THE CALENDAR OF COLIGNY

based on the Reconstruction<sup>3</sup> edited by the late Sir John Rhŷs in the Proceedings of the British Academy, volume IV, page 292 (85); the revision being made in accordance with the arguments and conclusions of this paper and with the help of photographs provided by the courtesy of M. Gabriel Hanotaux, former French Minister of Foreign Affairs.

## FIRST INTERCALARY MONTH, FIRST YEAR (COL. 1).

	D . . . . .		
Line 1	MID[X . . . . .	ANTARAN]	[ATENOVX]
	MATV . . . . .		
	I . . . . .	MATD [SIMIVIS IN]	[I MD EDRI IN ELEM]
		GIAM [DVM IVOS]	[II D ELEM IN ED]RIN
L. 5	II . . . . .	MAT D [ . . . . .	[III D CANTLI A]MB RIV
		SONNA [ . . . . .	[III MD SAMO]NI
	III . . . . .	MA[T D SIMIV IVOS]	V D DVMANNI AMB RIV
	III . . . . .	[D ELEM BIV ]	VI   † MD RIVRI
	V . . . . .	[D EDRIN AMB]	VII NSDS SAM[O]NI ANAGAN
L. 10	VI . . . . .	[D CANTLI ]	INNIS . . . . . TIT .
	VII . . . . .	N . . . . .	L. 35 VIII NSDS . . . . . TO
	TINAD . . . . .		INN . . . . .
	NE . . . . .		VIII N . . . . .
	VI . . . . .		ED . . . . .
L. 15	VIII . . . . .	[SAMON IN DVMAN]	SV . . . . .
		MA[T D DVMAN ]	L. 40 [X D GIAMONI ]
	VIII . . . . .	MA[T D SAMONI ]	[XI D SIMIVIS AMB IVO
	EDVTIO . . . . .		[XII D EQVI IVO
	MV . . . . .		[XIII D ELEM B I AMB IVO
L. 20	X . . . . .	[D ANAGANT ]	X[III MD EDRINI IVO
	XI . . . . .	[D OGRON AMB ]	L. 45 XV [D CANTLI IVO
	[XII MD . . . . .	CVTIOS ]	[ . . . . A]MB RIXTIO
	[XIII D . . . . .	GIAMONI ]	COB . . . . . CARIEDIT
	[XIII D . . . . .	EQVI IN SIMI]	OX . . . . . ANTIA
L. 25	[XV MD . . . . .	SIMI IN EQVV ]	POGDEDORTONIN
			L. 50 QVIMON



Notes. — For the diurnal notation, extant or supplied, reference should be made from each date to the corresponding date of the corresponding month in a series beginning with Giamon.,—from day 1 to day 1 of month 1, from day 16 (Atenoux 1) to day 16 (Aten. 1) of month 16 (= month 4), and so on. In addition, days 7, 8, and 9, in each half-month receive the notation of the corresponding days of Samon, and IVOS is transferred from its dates in Samon to the corresponding dates in this table.

Line 4.—Day 1. On the analogy of the second intercalary month, which interchanges the notation of day 1 with the following month, Giamon., I suppose the present month to interchange the notation of day 1 with Samon. Day 1 should thus have a twofold notation, besides IVOS. Space would not have admitted the fuller interchanged notation DVMANNI IN SAMON., from Samon. 1, and I have followed the usage of the Calendar in such cases by inserting DVM only.

Line 11. Day 7. Here again a twofold notation is due; but since the source of both is Samon. 7, the two notations would have been identical. I cannot venture to combine the notation from Samon. 7, SAMON PRINI LOVDIN, with the fragments of words that remain. The notation of this date occupied four lines and it may have contained an expanded presentation of PRINI LOVDIN. The first letter N does not appear to correspond here to N INIS R.

Line 15. Day 8. The notation is derived from Dumann. 8, which has MD SAMONI. Such twice transferred notations can be expressed with the proposition IN, as at Atenoux 2 of the second intercalary month, or without the preposition as at Atenoux 3 of the same month, or simply by the name of the month of ultimate origin, as at Samon. 18: [SA]MO. I adopt the formula containing the preposition, as being the clearest. This day should derive a second notation from Samon. 8, which would give DVMANNI IN SAMON., and perhaps the lacuna contained DVMAN., as I give it, in the second line.

Line 17. Day 9. Here also should be a twofold notation, derived from Rivros 9 and Samon. 9. I have inserted the notation from Samon in the first line, following the model of the second intercalary month, Aten. 7, 8, 9. I do not know how the notation from Rivros 9, MD RIVRI, is to be fitted in with the fragmentary ...EDVTIO...MV...

Line 28. Aten. 2. Rhys has ...RIV, but the photographs show clearly ....RIN. Rhys has erred here exactly as the engraver has erred in several places, substituting for the correct notation something that was more in his mind at the time. He was doubtless influenced by RIVR, RIV, RIVRI, of the following lines.

Line 33. Aten. 7. Two notations are here combined—from Samon. At. 7, which would give D SAMONI AMB, and from Anagantios, At. 7, which would give N ANAGAN INIS R. This and the next date contained a more expanded form of N INIS R. Here and at day 8 above, we see that in a combined notation D is superseded by MD and by N. In At. 8 of the second intercalary month, in a combined notation, MD gives way to N. We infer that N (=NSDS) is a notation of higher order than MD, as MD is of higher order than D. Since D denotes the normal day of a "not-good"

month, and MD the normal day of a "good" month, N or NSDS must denote a day of more than ordinary solemnity.

Line 35. Aten. 8. There should be a twofold notation here, derived from Samon. At. 8, which gives N SAMONI INIS R, and from Ogron. At. 8, which gives MD CVTIO IN OGRON. By analogy with the last preceding date, we should read here NSDS SAMONI CVTIO(IN OGRO) INNIS .... Of ... TO, read by Rhys, O is complete but only the upper part of the letter taken for T remains, and I think the word may have been CVTIO. The top line of T is often engraved extending above a following letter.

Line 37. Here also a twofold notation is due, derived from Samon. At. 9, which gives N SAMONI INIS R, and from Cutios At. 9, which gives D CVTIO AMB (as at Ogron. At. 3). As at day 9 of the first half-month, I do not know how to combine these notations with the fragmentary N.... ED.... SV..., but ED... seems to belong to the same word as EDVTIO... of day 9, each being at the beginning of the second line. Rhys, again influenced by frequency, proposes to read ED[RINI], but this name has no probable connexion with the notation.

Lines 46-50. Rhys supposed these lines to contain a separate notice, of which he undertakes an interpretation of no validity. I consider it certain that AMB RIX and TIOCOB are part of the notation of At. 15, and probable that the remaining words are explanatory of the same notation, which I discuss later.

Following the serial order, this date should derive its notation from Cantlos At. 15, but, since Cantlos has only 29 days, the notation here must have been supplied otherwise. Part of the notation is TIOCOB ..., and this suggests that the date from which it is taken is Cantlos 15, which has D TIOCOBREXTIO in years 1, 2, and 3, but falls within lacunae for years 4 and 5. I take AMB RIX to be a more extended expression of the notation usually abbreviated to AMB — see Vocabulary, p. 34. Following TIOCOB ..., the words ... CAREDIT OX .. ANTIA POGDEDORTONIN QVIMON may have served to explain how, in the absence of a corresponding date from Cantlos, the actual notation was supplied. The lacuna in OX ... ANTIA has space for about two letters. In the photograph, the letters IM of QVIMON are by no means clear, but Rhys seems to regard the reading as certain. As RIXTIO in line 46 shows, the engraving cannot be relied on to indicate the end or beginning of words by spacing.

## SECOND INTERCALARY MONTH. THIRD YEAR (COL. 9).

Line 1	CIALLOSB . . IS		ATENOVX	
	SONNO CINGOS		I	D ANAGAN
	AMMAN . M . MXIII		II	†   MD QVTI IN OGRO
	... LAT. CCCLXXXV	L. 30	III	D OGRONI QVT
			III	D GIAMONI
L. 5	[MID] ANTARAN . M		V	D SIMIS AMB
	[I MAT]D SIMIVIS		VI	† D SIMIVISONN
	[ DV[MANNI IVOS			
	[II D [DV]MAN IVOS			QVTIO
	[III MATD RIV]RI IVO		VII	N GIAMONI
L. 10	[IIII OCIO]MVRIVRIAN	L. 35		ELEMBI
	[ DS MA]T ANAG		VIII	N GIAMONI
	[V D AMB OGR]O			AEDRINI
	[VI MD CVTIOS]		VIII	D GIAMO CANT
	[VII GIAM PRI LAG]			AMB RIVR
L. 15		L. 40	X	†   MD SAMON
	N . . . . .		XI	D DVMN AMB
	VIII MD [GIAM SIMI]		XII	† MD RIVRI
	VIII NO ... [ GIAMON]		XIII	D ANAG AMB
	INIS [R EQVI]		XIII	† D OGRONV
L. 20	X N EL[EM INIS R]	L. 45	XV	D AMBQVT
	XI D EDRI[NI AMB]			
	XII   † D CANTL[I]			
	XIII †   MD SAMONI			
	XIII D DVMANNI			
L. 25	XV DS MA. NS RIVR			

Notes. Line 1. There is a lacuna with space for one letter after B. Rhys reads B[V]IS. Whatever be the meaning of *Ciallos b . . is sonnociingos amman. m.*, what follows means "13 months, 385 days," the sum of months and days in the intercalated year. LAT[IA] = O. I. *luthe*.

Line 5. Before ANTARAN there is part of a letter which "seems to be the top twist of R or B." I suggest reading MID here as in the first intercalary month. I take *antar* to be the equivalent of Irish *etar*, Latin *inter*, and *antaran-* to mean "intercalary."

Lines 10-16. Rhys allots one line to day 4, two lines to day 5, three lines to day 6, one line to day 7. ANAG, l. 11, can only be placed in day 4, [OG]RO in day 5, and there is no reason for giving more than a single line

to day 6. The notation of day 4 is derived from Anagantios 4, which has MD OCIO MV RIVRI. Before RIVRI, Rhys reads . . . IV, but the photograph shows that, instead of I, we should read M—the stroke has a distinct slope / and the right apex of M seems discernible. At the end of this line, AN indicates that the notation, though it is nominally “of Rivros,” is found in Anagantios. The whole notation I take to mean “The completion (?) of Rivros in Anagantios. A good day of Anagantios.”

Line 15. Day 7. This date derives a twofold notation, but, the source of both being Giamon. 7, the two notations become one. In the second line, N . . . is not likely to belong to N INIS R, since the N(SDS) of the latter notation begins the whole notation of the dates at which it is found, and since N INIS R is not found at Giamon. 7. N . . . here probably belongs to the same word as NE . . . found at this date in the first intercalary month. PRINNI should form part of both notations.

Line 17. Day 8. The twofold notation of this date should come from Giamon. 8 and Simivisonn. 8. The material for Giamon. 8 is wanting but we find it transferred at Cutios I, 8, D GIAMONI. Simivisonn. 8 has only MD.

Line 18. Day 9. This date combines the notation of Giamon. 9, N GIAMO INIS R (as at Cutios I, 9), and of Equos 9, D (EQVI).

From this point onward, the material of this month is practically complete, and requires little comment, since, except for one word, it is explained by the rules of transference stated in this paper. The exceptional word is QVTIO of At. 6. The date cannot be connected with the month Cutios, and the notation of At. 2 and 3 shows that instead of QVTIO we should have IN EQVV or EQVI—the source being Equos At. 6. No authentic instance of the dative in -u is afforded by the Calendar, but we may suppose familiarity with this ending to have caused the engraving of OGRONV for OGRONI at At. 14. At line 25, day 15, the unusual notation DS MA NS RIVR is regularly derived from Rivros 15, which has [DS M]AT NS.



## SAMON(10S) = JUNE

Year 1 (Col. 1)			Year 2 (Col. 4)			Year 3 (Col. 7)			Year 4 (Col. 11)			Year 5 (Col. 14)		
MID SAM <sup>M</sup>			M SAMON <sup>MAT</sup>			[M SAMON <sup>MAT</sup> ]			M [SAMON <sup>MAT</sup> ]			[M SAMON <sup>MAT</sup> ]		
I	D	DVMANNI IVOS	I	N	DVMAN IVOS	I	[ D DVMAN ]	IVOS	I	[ D DVMANN IVOS ]	I	[ D DVMAN IVOS ]		
II	MD	IVOS	II	MD	IVOS	II	[MD	] IVOS	II	[MD IVOS ]	II	[MD IVOS ]		
III	†	D EXINGIDVM IVOS	III	†	[D] DVM IVO	III	[	] MELE IVO	III	[ D EXINGI DVM IVOS ]	III	[ D DVM IVO ]		
IIII	MD	IVOS	IIII	MD		IIII	[MD]		IIII	[MD IVOS ]	IIII	[MD ]		
V	D	AMB RIXRI	V	D	AMB	V	[ D	AMB ]	V	[ D AMB RIXRI ]	V	[ D AMB ]		
VI	MD		VI	MD		VI	[MD]		VI	[MD ]	VI	[MD ]		
VII	N	DVMANN INIS R	VII		PRINI LOVDIN	VII	[PRINNI]	LOVD	VII	[N DVMANN INIS R ]	VII	[ PRINI LOVD ]		
VIII	MD	[S]MO	VIII		D DVM	VIII	[ D	DV]M	VIII	MD [SAMO ]	VIII	[ D DVM ]		
VIIII	D	DVMANNI	VIIII	†	MD	VIIII	[MD]		VIIII	D DVMA[NNI ]	VIIII	[MD ]		
X	MD		X	MD		X	[MD]		X	MD	X	[MD ]		
XI	D	AMB	XI	D	AMB	XI	[ D	AMB ]	XI	D AMB	XI	[ D AMB ]		
XII	D	M	XII	MD		XII	[MD]		XII	MD	XII	[MD ]		
XIII	D	M	XIII	†	MD	XIII	[MD]		XIII	†   MD	XIII	[MD ]		
XIIII	D	M	XIIII	†	MD	XIIII	[MD]		XIIII	† MD	XIIII	[MD ]		
XV	D	M	XV	†	MD	XV	[MD]		XV	† MD	XV	[MD ]		
ATENOVX			ATENOVX			[ATENOVX]			ATENOVX			A[TENOV]X		
I	D	DVMANNI	I		D DVMAN	I	[ D DVMAN ]		I	D DVMANI	I	D DVMANI		
II	MD	TRINOSAM. SINDIV	II	†	D TRINVXSAMO	II	[MD TRINVX SAMO]		II	D PRINI SAM SINDI	II	MD PRINO SAMON		
III	D	AMB	III		D AMB	III	[ D	AMB ]	III	D AMB	III	D AMB		
IIII	MD		IIII	†	MD	IIII	[MD		IIII	†   MD	IIII	†   MD		
V	D	AMB	V	†	D AMB	V	[ D	AMB ]	V	† D AMB	V	† D AMB		
VI	†	M D	VI	†	MD	VI	[MD		VI	† MD	VI	† MD		
VII		D DVMANNI AMB	VII		D AMB	VII	[ D	AMB ]	VII	D DVM AMB	VII	D AMB		
VIII	†	D DVMANNI	VIII		N INIS R	VIII	[ N INIS R ]		VIII	D DVM	VIII	[ N INIS R ]		
VIIII		N DVMANNI. IN. R	VIIII		N INIS R	VIIII	[ N INIS R ]		VIIII	N DVM INIS R	VIIII	[ N INIS R ]		
X	[MD]		X	†	MD	X	[MD		X	†   MD	X	[MD ]		
XI	[D]	AMB	XI	†	MD AMB IVOS	XI	[ D	AMB IVOS ]	XI	† D AMB	XI	[ D AMB IVOS ]		
XII	[MD]		XII	†	MD IVOS	XII	[MD	IVOS ]	XII	† MD	XII	[MD IVOS ]		
XIII	[D	AMB]	XIII		D AMB IVOS	XIII	[ D	AMB IVOS ]	XIII	D AMB	XIII	[ D AMB IVOS ]		
XIIII	[MD]		XIIII		MD IVOS	XIIII	[MD	IVOS ]	XIIII	MD	XIIII	[MD IVOS ]		
XV	[D	AMB]	XV		D AMB IVOS	XV	[ D	IVOS ]	XV	D AMB	XV	[ D AMB IVOS ]		

## NOTES.

Year I. The tablet begins with the first intercalary month, followed by this month.

Year II. Aten. 2—for D read MD. Aten. 11—for MD read D.

Year IV. Aten. 2—read MD TRINV(X) SAM SINDI(V).

Year V. Aten. 2—read MD TRINO(VX) SAMON.

At this date in years 4 and 5, the engraver has substituted the frequent and familiar PRINI, PRINO, for the rare term TRIN(O)VX, which is found at no other date. No where else is PRIN(N)I, PRIN(N)O, found outside of a regular sequence in the first eight or nine days of a month, and no where else is this notation preceded by D or MD. The omission of M before D at this date in years 2 and 4 is a slip of which there are many other instances. It is pretty certain that the vertical lines of D were engraved in a continuous operation and the M's added afterwards. See days 12 to 15 in year 1. This led to occasional omission of M, and less often to the wrong insertion of M.

There is intercalary displacement in years 1 and 4, normal notation in years 2, 3, and 5.

N. B. Corrections in the form "for D read MD" imply that the actual reading of the text is "D".



DVMANN(10S) = JULY

Year 1 (Col. 1)		Year 2 (Col. 4)		Year 3 Col. 7)		Year 4 (Col. 11)		Year 5 (Col. 14)	
[M DVMAN <sup>ANM</sup> ]		M DVMAN <sup>ANM</sup>		M DVM[AN <sup>ANM</sup> ]		M DVMAN <sup>ANN</sup>		M [DVMAN <sup>ANM</sup> ]	
I	[ SAMON PRINI LOYD]	I	SAMON PRIOVDIXIVOS	I	SAMON PRIN LOD I[VOS]	I	SAMON PRINI LOVD	I	[SAMON PRIN LOVD IVOS]
II	[ D ]	II	N IVOS	II	N IVOS	II	D	II	[ N IVOS ]
III	[ D ]	III	D IVOS	III	D IVOS	III	D	III	[ D IVOS ]
IIII	[ D ]	IIII	D IVOS	IIII	D IVOS	IIII	D	IIII	[ D IVOS ]
V	[ PRINNI] LAGE	V	[P]RINNI LAGIT	V	PRINNI LAGE	V	PRIN[NI LAGE ]	V	[PRINNI LAGE ]
VI	[ D ]	VI	[D]	VI	D	VI	[ D ]	VI	[ D ]
VII	[MD R]IVRI	VII	N INIS R	VII	N INIS R	VII	[MD RIVRI ]	VII	[ N INIS R ]
VIII	[PRI LO] RIVRI	VIII †	MD SAMONI	VIII †	MD SAMONI	VIII	[PRI LO RIVRI ]	VIII	[MD SAMONI ]
VIIII	[M]D RIVRI	VIIII	D	VIIII	D	VIIII	[MD RIVRI ]	VIIII	[ D ]
X	[ D ]	X	D	X	D	X	[ D ]	X	[ D ]
XI	[ N] INIS R	XI	N INIS R	XI	N INIS R	XI	[ N INIS R ]	XI	[ N INIS R ]
XII	D	XII	D	XII	D	XII	[ D ]	XII	[ D ]
XIII	[ D] IVOS	XIII	D	XIII	D	XIII	[ D IVOS ]	XIII	[ D ]
XIIII	[ D IVOS ]	XIIII	D	XIIII	N	XIIII	[ D IVOS ]	XIIII	[ D ]
XV	[ D ]	XV	D	XV	D	XV	[ D ]	XV	[ D ]
[ATENOVX]		ATENOVX		ATENOVX		[ATENOVX]		[ATENOVX]	
I	[MD SAMONI ]	I	MD SAMONI	I	M[D SAMONI ]	I	[MD SAMONI ]	I	[MD SAMONI ]
II	[MD SAMONI ]	II	MD SAMONI	II	M[D SAMONI ]	II	[MD SAMONI ]	II	[MD SAMONI ]
III	[ D AMB IVOS ]	III †	D AMB	III	[D AMB ]	III	[ D AMB IVOS]	III	[ D AMB ]
IIII	D	IIII †	D	IIII	[D ]	IIII	[ D ]	IIII	[ D ]
V	[ D AMB IVOS ]	V	D AMB	V	D LAMB ]	V	[ D AMB IVOS]	V	[ D AMB ]
VI †	[ D ]	VI †	MD	VI †	D	VI	[ D ]	VI	[ D ]
VII	[ D RIVRI AMB ]	VII	D AMB	VII	D LAMB ]	VII	[ D RIVRI AMB]	VII	[ D AMB ]
VIII	[ D PETIVX ANAG ]	VIII †	D	VIII	D	VIII	[ D PETIVX ANAG]	VIII	[ D ]
VIIII	[ D RIVRI AMB ]	VIIII	N INIS R	VIIII	N INIS R	VIIII	[ D RIVRI AMB]	VIIII	N [INIS R ]
X †	[ D ]	X †	D	X	D	X	[ D ]	X	D
XI	[ D AMB IVOS ]	XI	D AMB	XI	N AMB	XI	[ D AMB IVOS]	XI	D AMB
XII	N [INIS R IVOS ]	XII	N INIS R	XII	N INIS R	XII	[ N INIS R IVOS]	XII	N INI R
XIII	[ D] AMB IVO	XIII	D AMB	XIII	D AMB	XIII	[ D AMB IVO ]	XIII	[ D] AMB
XIIII	NSDS IVO	XIIII	NS DS	XIIII	NS DS	XIIII	[ NS DS IVO ]	XIIII	NS DS
	DIVERTIOMV		DIVERTOMV		DIVORTOMV		[DIVERTOMV]		DIVIRTOMV

NOTES.

Year 1. Day 5. LAGE seems doubtful from the photographs. Rhys read AMB. The letters are near the ragged edge of a fracture, and it is not easy in the photograph to distinguish between engraved marks and marks which may be effects of fracture. I think that AMB may have been engraved first, then altered to LAGE. Parts of one or two letters seem visible further to the left. See p. 17 regarding PRINNI LAG. Rhys has placed the fragment days 5-14 two lines too low. Aten. 10. It is doubtful whether this day also should not have IVOS. The doubt is whether, following intercalation, IVOS of the last day of a 30-day month is transferred to a 29-day month.

Year 2. Day 1. For PRIOVDIX read PRI LOVDIN?

Aten. 6. For MD read D.

Year 4. For ANN in the heading read ANM.

There is intercalary displacement in years 1 and 4, normal notation in years 2, 3, and 5.





## RIVROS = AUGUST

## Year 1 (Col. 2)

[M RIVROS<sup>MAT</sup>]

I	[ D ANAGANT IVOS]
II	[PRINNI LOVD IVOS]
III	[M D IVOS]
IIII	[ OCI]OMVRIVO
V	D INIS R
VI	M D
VII	† D ANAGANTIO
VIII	‡ D ANAGANTIO
VIIII	D ANAGANTIO
X	M D
XI	N INIS R
XII	M D
	DEVORIVO RIVR[I ]
XIIII	M D [ ]
XV	M [D ]

[ATE]NOUX

I	[M]D
II	[M D]
III	[ D] AMB
IIII	[M D ]
V	[ D AMB ]
VI	[M D ]
VII	[ N ANAG INIS R ]
VIII	[ D ANAGANTIO ]
VIIII	[ N ANAG INIS R ]
X	[M D PETIVX RIVRI ]
XI	[ D AMB ]
XII	[M D ]
XIII	[ D AMB ]
XIIII	[M D ]
XV	[ D AMB ]

## Year 2 (Col. 5)

[M RIVR]OS<sup>MAT</sup>

I	[ A]NAGANT D
II	[ PRINNI] LOVD
III	[M D ]
IIII	[M D BRI]G RIVROS]
V	[ N I]NIS R
VI	[M D]
VII	[M D]
VIII	[ PRI]NNI LOVD
VIIII	[M D
X	M[D]
XI	[N] INIS R
XII	[M D]
XIII	... M] IVG RIV.....
XIIII	[M D] ... IVO .....
XV	[M D .....]

[ATENOVX]

I	[M D ]
II	[M D ]
III	[ D AMB IVO ]
IIII	[M D ]
V	[ D AMB IVO]S
VI	[M D ]
VII	[ D A]MB
VIII	[ D P]ETIVX ANAG
VIIII	D AMB
X	‡ M D PETIVX RIVRI
XI	† D AMB IVOS
XII	‡ M D IVOS
XIII	‡ D AMB IVOS
XIIII	M D IVOS
XV	D AMB IVOS

## Year 3 (Col. 8)

M RIVROS<sup>MAT</sup>

I	D ANAG
II	PRINNI LOVD
III	N
IIII	MD BRIG RIV
V	N INIS R
VI	MD
VII	MD
VIII	PRINI LO ...
VIIII	‡ M D
X	‡ M D
XI	[ N INIS R ]
XII	[MD ]
XIII	[MD IV. G. RIVRI ]
XIIII	[MD IVOS]
XV	[MD .....]

ATENO[VX]

I	MD
II	MD
III	D AM[B I]VO
IIII	MD
V	‡ D AM[B] IVO
VI	‡ M D
VII	‡ D AMB
VIII	D PETI RIVRI ANAG
VIIII	N
X	...[....] IVRIDRIVRI ‡ M
XI	[ D AMB] IVOS
XII	[MD ] I]VOS
XIII	[ D AMB] IVOS
XIIII	[MD ] IVOS
XV	[ D AMB] IVOS

## Year 4 (Col. 11)

[M RIVROS<sup>MAT</sup>]

I	[ D ANAGANT IVOS]
II	[ PRINNI LOVD IVOS]
III	[MD ] IVOS
IIII	[MD BR]IG RIVRI
V	[ N I]NIS R
VI	[MD]
VII	[ D] ANAGDIOS
VIII	[ D] ANAG
VIIII	[ D A]NAG
X	[MD ]
XI	[ N INI]S R
XII	[MD ]
XIII	[MD ] IV-G-RIVRI
XIIII	[ DS ] MAT
XV	[ DS M]AT NS

[ATEN[OVX]

I	[MD ]
II	[MD ]
III	[ D AMB ]
IIII	[MD ]
V	[ D AMB ]
VI	[MD ]
VII	[ N ANAG INIS R ]
VIII	[ D ANAGANTIO ]
VIIII	[ N ANAG INIS R ]
X	[MD PETIVX RIVRI ]
XI	[ D AMB ]
XII	[MD ]
XIII	[ D AMB ]
XIIII	[MD ]
XV	[ D AMB ]

## Year 5 (Col. 14)

M RIVROS<sup>MAT</sup>

I	D ANAGANTIO
II	PRINNI LOVD
III	MD
IIII	[MD ...]TIO RIVRO
V	[ N INIS R ]
VI	[MD ]
VII	[MD ]
VIII	[ PRINNI LOVD ]
VIIII	[MD ]
X	[MD ]
XI	[ N INIS R ]
XII	[MD ]
XIII	[MD IV. G. RIVRI]
XIIII	[MD IVOS]
XV	[MD ]

[ATENOVX]

I	[MD ]
II	[MD ]
III	[ D AMB IVOS]
IIII	[MD ]
V	[ D AMB IVOS]
VI	[MD ]
VII	[ D AM]B ]
VIII	[D PETI R]IVRI ANAG
VIIII	[ D AM]B
X	[MD PETI] RIVRI
XI	[ D AMB IVOS]
XII	[MD IVOS]
XIII	[ D AMB IVOS]
XIIII	[MD ]
XV	[ D AMB IVOS]

## NOTES

Year 1. Day 4: So Rhys. The photograph is not clear. [OCI]OMV, if correct, should come by transference from Anag. 4, but if this notation were subject to transference, it should also appear at Rivros IV 4, and it should be displaced from Anag. IV 4. Day 13: The numeral is omitted. The first V has as it were a small v engraved within it.

Year 3. Aten. 10: So Rhys. In the photograph, instead of IUR, the legible part of the line seems to begin with [PET]IVX. The letters M and D and the sign ‡ seem to have been crowded out of their usual places and afterwards inserted where there was room, ‡ and M at the end of the line, D before RIVRI.

There is intercalary displacement in years 1 and 4, normal notation in years 2, 3 and 5.



## ANAGANTIOS = SEPTEMBER.

Year 1 (Col. 2)			Year 2 (Col. 5)			Year 3 (Col. 8)			Year 4 (Col. 11)			Year 5 (Col. 14)		
M ANAGAN <sup>ANM</sup>			M ANAGAN <sup>ANM</sup>			M [AN]AGTIO <sup>ANM</sup>			[M ANAG]AN <sup>ANN</sup>			[M ANAGAN <sup>ANM</sup> ]		
I	[M D	RIVRI ]	I	MD	RIVRI IV[OS]	I	M[D]	RIVRI EXO IVO	I	M D	RIVRO	I	[MD	RIVRI IVOS]
II	[ D	]	II	[ D	IVOS]	II	[ D]	IVOS	II	D		II	D	GO RIV....
III	[ D	]	III	[ D	IVOS]	III	[ D]	IVOS	III	D		III	D	IVO
IIII	M[D	OCIOMV RIVRI]	IIII	[MD	OCIOMV RIVRI]	IIII	[M D]	OCIOM RIVRI	IIII	M D	OCIOMV RIVRI	IIII	MD	OCIOMV RIVRI
V	N	[INIS R ]	V	[ N	INIS R ]	V	D	INIS R	V	N	INIS [R]	V	N	INI R
VI	PR[INNI	LAG ]	VI	[ PRINNI	LAG ]	VI	PRINNI	LAG	VI	[PRIN]NI	[LAG]	VI	PRIN	LAG
VII	M D	OG[RONI ]	VII	[ D	]	VII	NS DS		VII	M D	OGRONI	VII	D	
VIII	M D	OGRON[I ]	VIII	[ D	]	VIII	D		VIII	M D	OGRONI	VIII	D	
VIIII	M D	OGRONI ]	VIIII	[ D	]	VIIII	D		VIIII	M D	[OGR]ONI	VIIII	D	
X	D		X	D		X	D		X	D		X	[ D]	
XI	D	AMB	XI	D	[AMB]	XI	D	AMB	XI	[ D]	AMB	XI	[ D]	AMB
XII	†	D	XII	D		XII	D		XII	[ D		XII	[ D	
XIII	†	D	XIII	D		XIII	[ D]		XIII	[ D		XIII	[ D	
XIIII	†	D	XIIII	D		XIIII	[ D]		XIIII	[ D		XIIII	[ D	
XV	D		XV	D		XV	[ D]		XV	[ D		XV	[ D	
[AT]ENOVX			ATENOVX			ATEN[OVX]			ATENOV[X]			[ATENOVX]		
I	D		I	D		I	[ D]		I	D		I	[ D	
II	D		II	D		II	[ D]		II	D		II	D	
III	[ D]	AMB	III	†	D	AMB	[ D]	AMB	III	D	AM[B ]	III	†	D
IIII	[ D]		IIII	†	D		[ D]		IIII	D		IIII	†	D
V	[ D]	AMB	V	†	D	AMB	[ D]	AMB	V	D	AMB	V	†	D
VI	[ N]	INIS R	VI	N	INIS R	VI	[ N]	INIS R	VI	N	INIS	VI	N	INI R
VII	[ D]	OGRO AMB	VII	N	INIS R	VII	[ N]	INIS R	VII	†	D	VII	N	INI R
VIII	M D	CVTIO	VIII	D		VIII	[ D]		VIII	†	M D	VIII	D	
VIIII	D	OGRON AMB	VIIII	N	INIS R	VIIII	[ N]	INIS R	VIIII	D	AMB	VIIII	N	INI R
X	††	D	X	D		X	[ D]		X	NS DS		X	†	D
XI	†	D	XI	†	D	AMB	[ D	A]MB	XI	D	AMB	XI	†	D
XII	D		XII	D		XII	[ D	]	XII	D		XII	D	
XIII	D	AM[B]	XIII	D	AMB	XIII	[ D	AMB]	XIII	D	AMB	XIII	D	[AMB ]
XIIII	D		XIIII	D		XIIII	[ D		XIIII	D		XIIII	[ D	
	DIVERTOMV			DIVORTOMV			[DIVORTOMV]			DIVIRTOMV			DIVIRTOMV	

## NOTES

Year 4. For ANN in the heading read ANM. Day 1: In RIVRO, "le O parait certain" (M. Lechat). Day 6: D [OGR]ONI was read by Rhys but corrected later.

Year 5. Day 2: "M. Lechat regards GO as intact and certain. He identifies also the distinctive features of RIV, and I thought that I could distinguish the lower points of the final RI" (Rhys). The reading is evidently difficult, the photographs being illegible here. The notation as given is quite anomalous. Normally, we should expect no more than D IVOS, as in day 3.

There is intercalary displacement in years 1 and 4, that is to say transference of the notation IVOS and of the notation of days 7, 8, and 9, in each half of the month, to the month preceding, and the corresponding transference to this month from the month following.

In day 4, years 3 and 5, I think the reading may be OGIOM, OGIOMV. For year 4, the photographs are not legible at this place.





## OGRON(10S) = OCTOBER

Year 1 (Col. 2)

[M OGRON<sup>MAT</sup>]

I	[MD	]
II	[MD	]
III	[PRINNI LOVD	]
IIII	M[D	]
V	N [INIS R	]
VI	MD [	]
VII	MD [GVTIO	]
VIII	MD CVT[IO	]
VIIII	N CVT[IO INIS R]	]
X	MD [	]
XI	D [	]
XII	MD [	]
XIII	MD [	]
XIIII	MD [	]
XV	MD [	]

ATENOVX

I	MD CVT[IO	]
II	MD CVT[IO	]
III	D CV[TIO AMB]	]
IIII	MD]	]
V	[ D AMB	]
VI	[MD	]
VII	[ D CVTIO AMB	]
VIII	[MD OGRO CVTI	]
VIIII	[ D CVTIO AMB	]
X	[MD	]
XI	[ D AMB	]
XII	[ N INIS R	]
XIII	[ D AMB IVOS	]
XIIII	[MD IVOS	]
XV	[ D AMB IVOS	]

Year 2 (Col. 5)

M OGRON<sup>MAT</sup>

I	[MD	]
II	[MD	]
III	[PRINNI LOVD	]
IIII	[MD	]
V	[ N INIS R	]
VI	[MD	]
VII	[MD	]
VIII	[MD	]
VIIII	[MD	]
X	[MD	]
XI	[ D AMB	]
XII	[MD	]
XIII	[MD	]
XIIII	[MD	]
XV	[MD	]

[ATENOVX]

I	[MD CVTIO	]
II	[MD CVTIO	]
III	[ D CVTIO AMB]	]
IIII	[MD	]
V	[ D AMB	]
VI	[MD	]
VII	[ D AMB	]
VIII	[MD CVTIO	]
VIIII	[ D AMB	]
X	[MD	]
XI	[ D AMB	]
XII	[ N INIS R	]
XIII	[ D AMB	]
XIIII	[MD	]
XV	[ D AMB	]

Year 3 (Col. 8)

[M OGRON<sup>MAT</sup>]

I	[M D	]
II	[M D	]
III	[PRINNI LOVD	]
IIII	[M D	]
V	[ N INIS R	]
VI	[M D	]
VII	[M D	]
VIII	M D	]
VIIII	†   M D	]
X	†   M D	]
XI	†   D AMB	]
XII	M D	]
XIII	[M]D	]
XIIII	[M D]	]
XV	[M D]	]

[ATE]NOVX

I	M D CVTIO	
II	N CVTIO	
III	†   D CVTIO AMB]	
IIII	M D	
V	D AMB	
VI	†   M D	
VII	†   D AMB	
VIII	†   M D CVTIO	
VIIII	D AMB	
X	M D	
XI	D AMB	
XII	N INIS R	
XIII	†   D AMB	
XIIII	†   M D	
XV	D AMB	

Year 4 (Col. 12)

[M OG]ROM<sup>MAT</sup>

I	[MD	]
II	[MD	]
III	[PRINNI LOVD	]
IIII	[MD	]
V	[ N INIS R	]
VI	[MD	]
VII	[MD QVTIO	]
VIII	[MD QVTIO	]
VIIII	[ N QVTIO INIS R]	]
X	[MD	]
XI	[ D AMB	]
XII	[MD	]
XIII	[MD	]
XIIII	[MD	]
XV	[MD	]

ATENOV[X]

I	†   MD QVTIO	
II	†   MD QVTIO	
III	†   D AMB QVTIO	
IIII	MD	
V	D AMB	
VI	D	
VII	†   AMB QVTIO	
VIII	†   MD OGRO QVTI	
VIIII	†   D AMB Q[VTIO]	
X	MD [	]
XI	[ D] AMB	]
XII	[ N INIS R	]
XIII	[ D AMB IVOS	]
XIIII	[MD IVOS	]
XV	[ D AMB IVOS	]

Year 5 (Col. 15)

[M OGRON]<sup>MAT</sup>

I	[MD	]
II	[MD	]
III	[PRINNI] LOVD	
IIII	[MD	]
V	[ N INIS] R	
VI	[MD	]
VII	[MD	]
VIII	[MD	]
VIIII	[MD	]
X	[MD	]
XI	[ D AMB	]
XII	MD	
XIII	MD	
XIIII	D	
XV	D	

ATENOV[X]

I	MD QVTIO	
II	MD QVTIO	
III	D AMB QVTIO	
IIII	MD	
V	D AMB	
VI	MD	
VII	D AMB	
VIII	MD QVTIO	
VIIII	D AMB	
X	MD	
XI	D AMB	
XII	N INIS R	
XIII	†   D AMB	
XIIII	†   MD	
XV	D AMB	

## NOTES

Year 1. Day 5: Rhys reads D, but the photograph shows the first stroke of N. Year 5 has R in the usual detached position, and the restoration of N INIS R is safe.

Year 4. The heading has [OG]ROM for OGRON or OGRONI. Aten. 6: For D read MD. Aten. 7: D is omitted before AMB.

Year 5. Day 3: Rhys has LOVD in the line of day 2, wrongly. Days 14, 15: For D read MD. The apparent absence of M may be due to defacing.

There is intercalary displacement in years 1 and 4.



CVTIOS = NOVEMBER

Year 1 (Col. 2)			Year 5 (Col. 15)		
M [CVTIOS <sup>MAT</sup> ]			M CVTIOS <sup>MAT</sup>		
I	MD	IVOS	I	M D	
II	MD	IVOS	II	M D	
III	MD	IVOS	III	M D	
IIII	PRINI	LOVD	IIII	PRINNO LOVD	
V	N	INIS R	V	N INI R	
VI	MD		VI	M D	
VII	GIAM PRI LAG		VII	M D	
VIII	D GIAMONI		VIII	M D	
VIIII	N GIAMO INIS R		VIIII	N INI R	
X	MD		X	M D	
XI	D AMB		XI	D AMB	
XII	MD		XII	N	
XIII	MD		XIII	M D	
XIIII	MD		XIIII	M D	
XV	MD		XV	M D	
ATENOVX			ATENOVX		
I	MD	OGRON[I]	I	M D	OGRONI
II	MD	OGRON[I]	II	M D	OGRO
III	D	OGRON[I AMB]	III	D	AMB OGR
IIII	N	IN[IS R]	IIII	N	INI R
V	D	AMB	V	D	AMB
VI	N	INIS [R]	VI	N	INI R
VII	N	GIAM[O INIS R]	VII	D	AMB
VIII	N	GIA[MO INIS R]	VIII	M D	OGRONI
VIIII	D	AMB [GIAMO]	VIIII	D	AMB
X	MD	[ ]	X	[M]D	
XI	D	[AMB ]	XI	D	AMB
XII	MD		XII	[M]D	
XIII	D	[AM]B	XIII	D	AMB IVO
XIIII	[MD]		XIIII	M D	IVO
XV	[ D]	AMB	XV	[ D]	IVO

NOTES

Of this month, nothing remains for years 2 and 4; for year 3, only a fragment of the heading, and a fragment of the Atenoux containing the day-numbers V to VI, four of the signs (VII +|[], VIII +|, VIIII ||+, XIII +|), the notation MD of days 10 and 12, D of days 11 and 13. Fortunately, however the material is practically complete for year 1, which has intercalary displacement, and for year 5, which is normal.

Year 5. Day 15. Rhys has D, the photograph MD.





GIAMON(IOS) = DECEMBER

Year 1 (Col. 3)		Year 2 (Col. 6)		Year 3 (Col. 9)		Year 4 (Col. 12)		Year 5 (Col. 15)	
[M GIAMON <sup>ANM</sup> ]		[M GIAM]ONI <sup>[ANM]</sup>		M GIAMON <sup>ANM</sup>		[M GIAMON <sup>ANM</sup> ]		[M GIA]MOM <sup>ANM</sup>	
I	[MD SIMIVISON GIA ]	I	[MD SIMIVISON IVOS]	I	MD SIMIVISON GIA	I	[MD SIMIVISON IVOS]	I	[Mm SI]MIVS EXO IVO
II	[ D ]	II	[ D IVOS]	II	D	II	[ D IVOS]	II	[ D] IVO
III	[ D ]	III	[ D IVOS]	III	D	III	[ D IVOS]	III	[ D IVO]
IIII	[ D ]	IIII	[ D ]	IIII	D	IIII	[ D ]	IIII	[ D ]
V	[ D AMB ]	V	[ D AMB ]	V	D AMB	V	[ D AMB ]	V	[ D AMB ]
VI	[ D ]	VI	[ D ]	VI	D	VI	[ D ]	VI	D
VII	[MD SIMIVI TIOCBR ]	VII	[ PRINNI LAG ]	VII †	MD SIMIVI TIOCBR	VII	[ PRINNI LAG ]	VII	PRINNI LA[G]
VIII	[MD SIMIVIS ]	VIII	[ D ]	VIII	MD SIMIVIS	VIII	[ D ]	VIII	D
VIIII	[MD SIMI SIND IVOS]	VIIII	[ N INIS R ]	VIIII	MD SIMI SIND IVOS	VIIII	[ N INIS R ]	VIIII	N IMI R
X	[ D ]	X	[ D ]	X	D	X	[ D ]	X	D
XI	[ D AMB ]	XI	D [AMB ]	XI	D AMB	XI	[ D AMB ]	XI	D AMB
XII	[ D ]	XII	D	XII	D	XII	[ D ]	XII	D
XIII	[ D ]	XIII	D	XIII	D	XIII	[ D ]	XIII	[ D ]
XIIII	[ D ]	XIIII	D	XIIII	D	XIIII	[ D ]	XIIII	[ D ]
XV	[ D ]	XV	D	XV	D	XV	[ D ]	XV	[ D ]
[ATENOVX]		ATENOVX		ATENOVX		[ATENOVX]		[AT]ENOVX	
I	[ D]	I	D	I	D	I	[ D ]	I	[ D ]
II	D[S D]S	II	NS DS	II	NS DS	II	[ NS DS ]	II	[ NS DS ]
III	D AMB	III	D [AM]B	III	D AMB	III	[ D AMB ]	III	[ D AMB ]
IIII †	D	IIII †	D	IIII	D	IIII	[ D ]	IIII †	[ D ]
V †	D AMB	V †	D AMB	V	D AMB	V	[ D AMB ]	V †	[ D AMB ]
VI †	D	VI †	D	VI †	D	VI	[ D ]	VI †	[ D ]
VII	D SIMIVI AMB	VII	N INI R	VII	D SIMI AMB	VII	[ N INI] R	VII	[ N INIS R ]
VIII	MD SIMIVISO	VIII	N INI R	VIII	[MD] SIMIVI	VIII	[ N INI]S R	VIII	[ N INIS R ]
VIIII	D SIMIVIS AM[B]	VIIII	D AMB	VIIII	[ D SI]MIVIS AMB	VIIII	[ D A]MB	VIIII	[ D AMB ]
X †	D	X †	D	X	[ D ]	X	[ D]	X	[ D ]
XI	N INIS R	XI	N INI R	XI	[ N INI] R	XI	[ N] INI R	XI	[ N INIS R ]
XII †	D	XII †	D	XII	[ D ]	XII	[ D]	XII	[ D ]
XIII	D AMB	XIII	D AMB	XIII	[ D AMB ]	XIII	D AMB	XIII	[ D AMB ]
XIIII	D	XIIII	D	XIIII	[ D ]	XIIII	D	XIIII	[ D ]
DIVERTOMV		DIVORTOMV		[DIVORTOMV]		DIVERTOMV		[DIVERTOMV]	

NOTES

Year 3. This month is preceded by the second intercalary month.

Year 5. In the heading, [GIA]-MOM is for GIAMON or GIAMONI. Days 6 to 12: I have placed here "Fragment 2" of the "Unplaced Fragments" of the edition by Rhys, in which day 9 has IMI for INI. The month is determined by VII PRINNI LA. The contents are equally suitable to year 4. The transferred notation of Cutios I 7 misled Rhys into thinking that this fragment could belong to Cutios.



## SIMIVISONN .... = JANUARY

Year 1 (Col. 3)			Year 2 (Col. 6)			Year 3 (Col. 9)			Year 4 (Col. 12)		
M SIMIVI <sup>MAT</sup>			M SIMIV <sup>[ISMAT]</sup>			M SIMIV <sup>[ISMAT]</sup>			M SIMIVIS <sup>MAT</sup>		
I	GIAMO	PRIN LAG	I	[GIAMO PRINI LAG ]		I	GIAMON P[RINI LAG]		I	GIAMO PRINI LAG	
II	MD		II	[M D ]		II	[M D ]		II	N	
III	D	EQVI	III	[ D EQVI ]		III	+ D EQ[VI ]		III	+ D EQVI	
IIII	MD		IIII	[M D ]		IIII	M D		IIII	MD	
V	N	INIS R	V	[ N INIS R ]		V	D [INIS R ]		V	N INIS R	
VI	D	EQVI	VI	[ D EQVI ]		VI	D EQVI		VI	D EQVI	
VII	D	EQVI	VII	[M D TIOCOBREXTIO]		VII	D EQVI		VII	MD TIOCOBREXTIO	
VIII	EQV	PRI LA	VIII	[M D ]		VIII	EQVI PRINNI LA		VIII	MD	
VIIII	D	EQVI	VIIII	[M D SINDIV IVOS]		VIIII	D EQVI		VIIII	MD SINDIV IVOS	
X	MD		X	[M D ]		X	M D		X	MD	
XI	D	AMB	XI	[ D AMB ]		XI	+ [D] AMB		XI	N	
XII	MD		XII	[M D ]		XII	+ M D		XII	MD	
XIII	D	EQVI	XIII	[ D EQVI ]		XIII	D EQVI		XIII	D EQVI	
XIIII	NS DS		XIIII	[ D EQVI ]		XIIII	D EQVI		XIIII	[ D EQVI ]	
XV	[.....]S EQVI		XV	D EQVI		XV	D EQVI		XV	[ D EQVI ]	
[ATENOVX]			ATENOVX			ATENOVX			[ATENOVX]		
I	[ D	EQVI ]	I	D	EQVI	I	D	EQVI	I	[ D	EQVI ]
II	[ D	EQVI ]	II	D	EQVI	II	D	EQVI	II	[ D	EQVI ]
III	[ D	EQVI AMB]	III	D	AMB EQVI	III	D	EQVI AMB	III	[ D	AMB EQVI ]
IIII	[MD	]	IIII	+ M D		IIII	[M D	]	IIII	[MD	]
V	[ D	AMB ]	V	D	AMB	V	[ D	AMB ]	V	[ D	AMB ]
VI	+ D	EQVI	VI	+ D	EQVI	VI	[ D	EQVI ]	VI	[ D	EQVI ]
VII	+ D	EQVI AMB	VII	D	AMB	VII	[ D	EQVI AMB ]	VII	[ D	AMB ]
VIII	D	EQVI	VIII	+ M D		VIII	[ D	EQVI ]	VIII	[MD	]
VIIII	D	AMB EQVI	VIIII	+ D	AMB	VIIII	[ D	AMB EQVI ]	VIIII	[ D	AMB ]
X	MD		X	M D		X	[M D	IVOS ]	X	[MD	]
XI	D	AMB EQVI	XI	D	AMB	XI	[ D	AMB ]	XI	[ D	AMB ]
XII	MD	IVOS	XII	[M]D		XII	[M D	IVOS ]	XII	[MD	]
XIII	D	AMB IVOS	XIII	[ D]	AMB	XIII	[ D	AMB IVOS ]	XIII	[ D	AMB ]
XIIII	MD	IVOS	XIIII	[M D]	AMB	XIIII	[ D	IVOS ]	XIIII	[MD	]
XV	D	AMB IVOS	XV	[ D]	AMB	XV	[ D	AMB IVOS ]	XV	[ D	AMB ]

## NOTES.

In year 5, nothing remains of this month except [M]AT of the heading and the numerals of the days 1 to 8. The notation should normally be the same as in years 2 and 4.

Year 1. Day 14: From day 14 in year 3 and in Equos, years 1 and 4, it is seen that this date exchanges notation with Equos. It has been shown in the course of this paper that Simiv. 14 supplies the notation of day 14 in the first intercalary month, and that N or NS DS is the counterpart of such supplied notation. Here apparently NS DS displaces the notation D EQVI. Day 15: Before S, part of N seems to be legible. The notation seems to be interchanged with Equos I 14, which has the singular notation MD SEMICANO. Aten. 11: EQVI seems here to have been inserted by parablepsis from Aten. 9. It is not found in year 2, and the counterpart SEMIVIS is not found in Equos, year 1.

Year 2. Aten. 14: AMB is "very faint; possibly it was never finished" (Rhys). An engraver's error.

This month shows intercalary displacement in years 1 and 3.

"Unplaced Fragment 5" of the edition by Rhys reads thus:—

MD T "The first M is very fragmentary, and the first T is apparently due to a  
MD TI slip." If the fragment belongs to this month, year 2 or 5, it should begin  
MD with day 6, D EQVI; and days 9 and 10 should have MD. The only  
D likely alternative place is in Edrin., year 2 or year 4. There the first  
D line would belong to day 7, and days 10 and 12 would have MD. Further  
D inspection of the fragment may prove decisive. The description by Rhys  
is not conclusive, but so far as it goes, it seems to rule out Giam. I, days 6 to 11  
or days 7 to 12.





## EQVOS = FEBRUARY

Year 1 (Col. 3)				Year 2 (Col. 6)				Year 3 (Col. 10)				Year 4 (Col. 13)				Year 5 (Col. 16)			
M EQVOS <sup>ANM</sup>				[M EQV]OS <sup>[ANM]</sup>				M EQVOS <sup>ANM</sup>				M EQVOS <sup>A[NM]</sup>				M EQVOS <sup>ANM</sup>			
I	[ D]	IVOS		I	D			I	[ D]	IVOS		I	D			I	D		
II	PRINI	LAG	IVOS	II	PRI[NNI	LAG	]	II	PRIN	LAG	IVOS	II	PRINI	LAG		II	PRIN	LA[G]	
III	MD	SIMI	IVOS	III	M D	[SIMIV	]	III	MD	[SIMIV]	IVOS	III	N	SEMIV		III	N	SIMIVI[ ]	
IIII	D		IVOS	IIII	[D		]	IIII	[ D		IVOS	IIII	+	D		IIII	+	D	
V	D	AMB		V	[D	AMB	]	V	[ D	AMB	]	V	[ D	AMB	]	V	D	AMB[ ]	
VI	MD	SIMIVISO		VI	+ N[	SIMIV	]	VI	[MD	SIMIVISO	]	VI	MD	SIM		VI	MD	SEM[ ]	
VII	D	ELEMBI		VII	D[	AMB	]	VII	[ D	ELEMBI	]	VII	D			VII	D		
VIII	D	ELEMBI		VIII	P[RINI	LAG	]	VIII	[ D	ELEMBI	]	VIII	PRINNI	LAG		VIII	PRINO	LA[G]	
VIIII	D	ELEMBI		VIIII	D[		]	VIIII	[ELEMBI	PRI	LAG]	VIIII	+	D		VIIII	+	D	
X	D			X	D[		]	X	[ D		]	X	+	D		X	+	[ D]	
XI	D	AMB		XI	[ D	AMB	]	XI	[ D	AMB	]	XI	D	AMB		XI	[ D	A]M[B	]
XII	D			XII	[ D		]	XII	[ D		]	XII	D			XII	[ D		]
XIII	MD	SEMIVIS		XIII	[M D]	SIMIVISO		XIII	[MD	SIMIVIS	]	XIII	MD	SIMI		XIII	[MD	SIMIVIS	]
XIIII	MD	SEMIVIS		XIIII	[M]D	SIMIVISO		XIIII	[MD	SIMIVIS	]	XIIII	MD	SIMI		XIIII	[MD	SIMIVIS	]
XV	MD	SEMIC	ANO	XV	[M]D	SIMI		XV	[MD	SIMIVIS	]	XV	MD	SIMI		XV	[MD	SIMIVIS	]
ATENOVX				[ATE]NOVX				[ATENOV]X				[ATE]NOVX				[ATENOVX]			
I	MD	SEM[I]VIS		I	[M D	SI]MIVI		I	[MD	SIMI]VI		I	[MD]	SEMIV		I	[MD	SIMIVIS	]
II	MD	SEMIVIS		II	[M D	SINI]V		II	[MD	SIMI]VI		II	[MD]	SEMIV		II	M[D	SIMIVIS	]
III	D	AMB	SIMIV	III	[ D	SIMI	AMB]	III	[ D	SIMIV]I	AMB	III	[ D	S]EMIV	[AMB]	III	D	SIMIVIS	[AMB]
IIII	D			IIII	[ D		]	IIII	[ D		]	IIII	[ D		]	IIII	D		
V	D	AMB		V	[ D	AMB	]	V	[ D	AMB	]	V	[ D	AM]B		V	+ D	AMB	
VI	+ MD	SIMISI		VI	[M D	SIMIVIS	]	VI	[MD	SIMIVIS	]	VI	[MD	SEMI]V		VI	+ MD	[SIM]IV[IS]	
VII	+ D	ELEMB	AMB	VII	[ D	AMB	]	VII	[ D	ELEMB	AMB]	VII	[ D	AMB]		VII	+ D	AMB	
VIII	+ D	ELEMB		VIII	[ D		]	VIII	[ D	ELEMB	]	VIII	[ D		]	VIII	D		
VIIII	D	AMB	ELEMB	VIIII	[ D	AMB	]	VIIII	[ D	AMB	ELEMB]	VIIII	[ D	AMB	]	VIIII	D	AMB	
X	D			X	[ D		]	X	[ D		]	X	[ D		]	X	[ D]		
XI	+ D		AMB	XI	[ D	AMB	IVO]	XI	[ D	AMB	]	XI	[ D	AMB	IVO]	XI	[ D	A]MB	IVO
XII	+ D			XII	[ D		IVO]	XII	[ D		]	XII	[ D		IVO]	XII	[ D		IVO]
XIII	+ D		AMB	XIII	[ D	AMB	IVO]	XIII	[ D	AMB	]	XIII	[ D	AMB	IVO]	XIII	[ D		IVO]
XIIII	D			XIIII	[ D		]	XIIII	[ D		]	XIIII	[ D		]	XIIII	[ D		IVO]
XV	D		[AMB]	XV	[DIVERTOMV]			XV	[ D	AMB	]	XV	[ D		]	XV	[ D	A]MB	IVO]

## NOTES.

Year 1. Day 9: The normal notation would be ELEMBI PRINNI LAG. Day 15: There is a slight space between SEMIC and ANO. Aten. 6: Before D, Rhys omits M, which is faint in the photograph.

Year 2. Day 8: Rhys reads D...

Day 13. I have placed here "Fragment 3" of the "Unplaced Fragments" of the edition by Rhys. Its contents are equally suitable to the same dates in year 3.

Year 3. Day 3: V of SIMIV seems discernible in the photograph. The notation is crowded. Aten. 1, 2, 3. I have placed here "Fragment 1" of the edition by Rhys. Its contents are equally suitable to the same dates in year 2.

Year 4. Day 11: Rhys omits AMB. Aten. 3: a faint A, for AMB, is visible.

Year 5. Aten. 6. Rhys reads only D, but M seems visible before D, and IV further to the right.

In the course of this paper, I show some evidence that in years 2 and 4, Equos contains only 28 days.

In years 1 and 3 there is intercalary displacement.



## ELEMBIV( IOS) = MARCH

Year 1 (Col. 3)

M ELEMB<sup>AN</sup>[M]

I	D	[IVOS]
II	[D	IVOS]
III	[PRINNI LAG IVO]S	
IIII	[ D	IVOS ]
V	[ D	AMB ]
VI	[ D	]
VII	[M D	EDRINI ]
VIII	[M D	EDR TIOCOB]
VIIII	[M D	EDRINI ]
X	[ N	INIS R ]
XI	[ D	AMB ]
XII	[ D	]
XIII	[ D	]
XIIII	[ D	]
XV	[ D	]

[ATENOVX]

I	[M D	EDRINI ]
II	[M D	EDRINI ]
III	[ D	AMB EDRIN]
IIII	[ D	]
V	[ D	AMB ]
VI	D	
VII	D	EDRI AMB
VIII	M D	EDRINI
VIIII	D	AMB EDRINI
X	D	SIND IVOS
XI	D	AMB
XII	†	D
XIII	†	D
XIIII	†	D

DIVERTOMV

Year 2 (Col. 6)

M ELEMBIV<sup>ANM</sup>

I	D	IVOS
II	D	IVOS
III	PRINNI LAG	IVOS
IIII	D	IVOS
V	D	IVOS
VI	D	AMB
VII	D	
VIII	D	
VIIII	PRINNI LAG	
X	N	INI R
XI	D	AMB
XII	D	
XIII	D	
XIIII	D	
XV	D	

ATENOVX

I	MD	EDRINI
II	MD	EDRINI
III	†	D
IIII		D
V		D
VI		D
VII	[ D]	AMB
VIII	[ D	]
VIIII	[ D	AMB ]
X	[ D	]
XI	[ D	AMB ]
XII	[ D	]
XIII	[ D	AMB ]
XIIII	[ D	]

[DIVERTOMV]

Year 3 (Col. 10)

M ELEMBIV<sup>ANM</sup>

I	[ D	IVOS ]
II	[ D	IVOS ]
III	[PRINNI LAG IVO]	
IIII	[ D	]
V	[ D	AMB ]
VI	[ D	]
VII	[MD	EDRINI ]
VIII	[MD	EDRIN]TIOCOB
VIIII	MD	EDRINI
X	N	INIS R
XI	D	AMB
XII	D	
XIII	D	
XIIII	D	
XV	D	

ATENOV[X]

I	[MD	EDRINI ]
II	[MD	EDRINI ]
III	[ D	AMB EDRIN ]
IIII	[ D	]
V	[ D	AMB ]
VI	[ D	]
VII	[ D	EDRI AMB ]
VIII	[MD	EDRINI ]
VIIII	[ D	AMB EDRINI ]
X	[ D	SIND IVOS ]
XI	[ D	AMB ]
XII	[ D	]
XIII	[ D	AMB ]
XIIII	[ D	]

[DIVERTOMV]

Year 5 (Col. 16)

[M ELEM]BIV<sup>ANM</sup>

I	[ D ]	IVO
II	[ D ]	IVO
III	[PRINNI LAG	IV[O]
IIII	[ D	IVO]
V	[ D	AMB ]
VI	[ D	]
VII	[ D	]
VIII	[ D	]
VIIII	[PRINNI LAG	]
X	N	[INIS R ]
XI	[ ]†	D
XII	D	[ ]
XIII	D	[AMB ]
XIIII	D	[ ]
XV	N	[ ]

ATENOVX

I	N	EDRIN[I]
II	MD	EDRI[NI]
III	D	AMB ED[RI]
IIII	D	
V		D
VI	†	D
VII	†	D
VIII		D
VIIII		D
X		D
XI		D
XII	†	D
XIII	†	D
XIIII	†	D

DIVERTOMV

## NOTES

From the transferred notation in Equos, years 1 and 3, it is inferred that IVOS belongs normally to the first four days of Elembiv. The material for Elembiv. 4 is not forthcoming except in year 2, where, I argue above, one of the five entries of IVOS is displaced from the end of Equos. I also argue that the position of AMB in day 6, year 2, is not, as Messrs Espérandieu and Rhys supposed, an error of the engraver, but is caused by displacement of a day from Equos.

The material of Elembiv in year 4 is wholly missing. The notation should be the same as in year 2.

Year 5. Day 15: I cannot account for the N which is found at this date, unless to suppose that it is placed here by mistake for Equos 15, where it would be the counterpart of the notation transferred from that date to the next intercalary month. At Aten. 1, N is regular. Aten. 2: The photograph seems to show traces of M, omitted by Rhys.

Intercalary displacement affects the notation of this month in years 1 and 3.





## EDRIN(10)S = APRIL

Year 1 (Col. 4)				Year 2 (Col. 7)				Year 3 (Col. 10)				Year 4 (Col. 13)				Year 5 (Col. 16)				
M EDRINI <sup>MAT</sup>				[M EDRINIO] <sup>SMAT</sup>				[M EDRINI <sup>MAT</sup> ]				[M EDRINI] <sup>MAT</sup>				M EDRINI <sup>MAT</sup>				
I	[ D]	CANTLI		I	[ D	CANTLI]	IVOS	I	[ D	CANTLI	]	I	[ D	CANTLO]S	IVO	I	D[	CANTL	IVOS]	
II	[MD]			II	[M D		IVOS	II	[MD		]	II	[M D		IVOS]	II	M[D		IVOS]	
III	[MD]			III	[M D		I]VOS	III	[MD		]	III	[M D		IVOS]	III	[M D		IVOS]	
IIII	[MD]			IIII	[M D			IIII	[MD		]	IIII	[M D			IIII	[M D			
V	[ D]	AMB		V	[ D	AMB	]	V	[ D	AMB	]	V	[ D	AMB	]	V	[ D	AMB	]	
VI	[MD]			VI	[M D		]R	VI	[MD		]	VI	[M D			VI	[M D			
VII	[ D	CA]NT		VII	[M D		]	VII	[MD	CANTL	]	VII	[M D			VII	[M D			
VIII	[ D	CANT	]	VIII	[M D	TIOCOBREXTIO]		VIII	[ D	]CANTL		VIII	[M D	TIOCOBREXTIO	]	VIII	[M D	TIOCOBREXTIO]		
VIII	[ D	CANT	]	VIII	[M D		]	VIII	[ D	]CANTL		VIII	[M D			VIII	[M D			
X	[MD		]	X	[M D		]	X	[MD]			X	[M D			X	[M D			
XI	[MD	AMB	]	XI	[ D	AMB	]	XI	D	ANB		XI	[ D	AMB	]	XI	[ D	AMB	]	
XII	[MD		]	XII	†	[M D		XII	†	MD		XII	[M D			XII	M D			
XIII	[MD		]	XIII	†	M[D		XIII	†	MD		XIII	[M D			XIII	M D			
XIII	[MD		]	XIII	†	M]D		XIII	†	MD		XIII	[M D			XIII	M D			
XV	[MD		]	XV	D M[		]	XV	MD			XV	[M D			XV	M D			
[ATENOV]X				ATENO[V[X				ATENOVX				[ATENOV]X				ATENOVX				
I	[ D	ELEMB	]	I	D	ELEMB		I	D	ELEMB		I	[ D]	ELEMBI		I	D	ELEMB		
II	[ D	ELEMB	]	II	D	ELEMB		II	D	ELEMB		II	[ D]	ELEMBI		II	N			
III	[ D]	ELEMB	AMB]	III	D	ELEMBI	AMB	III	D	ELEM	AMB	III	D	AMIELEMB		III	D	AMB	ELEMB	
IIII	[MD		]	IIII	†	M D		IIII	†	MD		IIII	†	[M]D		IIII	M D			
V	[ D	AMB	]	V	†	D	AMB	V	†	D	AMB	V	†	D	AMB	V	D	AMB		
VI	[MD		]	VI	†	M D		VI	†	MD		VI	†	M D		VI	†	M D		
VII	[ D	CANTL	AMB]	VII	D	AMB		VII	D	CANTL	AMB	VII	D	AMB		VII	D	AMB		
VIII	[ D	CANTL	]	VIII	M D			VIII	D	CANTL		VIII	M D			VIII	M D			
VIII	D	[CANTL	AMB]	VIII	†	D	AMB	VIII	D	CANTL	AMB	VIII	†	D	AMB	VIII	D	AMB		
X	MD	[	]	X	†	M D	SIND	IVOS	X	†	MD	X	†	M D	SINDIV	IVO	X	M D	SINDIV	IVOS
XI	D	[AMB	]	XI	†	D	AMB	XI	†	D	AMB	XI	†	D	AMB	XI	D	AMB		
XII	MD	[	]	XII	M D			XII	MD			XII	M D			XII	M D			
XIII	D	AMB	IVOS	XIII	D	AMB		XIII	D	AMB	[IVOS]	XIII	D	AMB		XIII	D	AMB		
XIII	MD		IVOS	XIII	M D			XIII	MD		[IVOS]	XIII	M D			XIII	M D			
XV	D[S] NS	AMB	IVOS	XV	N			XV	N		[IVOS]	XV	N			XV	N			

## NOTES.

The material for days 4 and 6 is missing, and is supplied here by analogy.

Year 1. Aten. 15: Rhys reads D. The photograph shows defacement, but there are traces of the notation as I give it.

Year 2. Day 6: At the extreme right of the line, R is found, being all that remains of the notation of this day in any year. Rhys, at Aten. 8, has D; at Aten. 10, D; at Aten. 13, MD. I read MD, MD, and D, respectively.

Year 3. Day 11: For ANB read AMB. Aten. 9: Rhys has omitted AMB. Towards the end of this month the photograph shows much defacement, but it appears to show IVO at Aten. 13.

Year 4. Aten. 3: For AMI read AMB.

Intercalary displacement affects the notation of years 1 and 3.

See "Notes" on Simivisonn. with regard to an unplaced fragment which may belong to Edrin.



## CANTLOS = MAY

Year 1 (Col. 4)				Year 2 (Col. 7)				Year 3 (Col. 10)				Year 4 (Col. 13)				Year 5 (Col. 16)				
M CANTLOSANM				M CANTLOSANM				M CANTLOSAN[M]				M CANTLOSANM				M CANTLOSANM				
I	[M]D	AEDRIN		I	MD	EDRINI		I	MD	AEDRINI	IVOS	I	M D	AEDRINI		I	MD	EDRINI		
II	D			II	D			II	D		IVOS	II	D			II	D			
III	D			III	D			III	D		IVOS	III	D			III	D			
IIII	PRINNI	LAG		IIII	PRINNI	LAGE		IIII	PRINNI	LAG		IIII	PRINNI	LAG		IIII	PRINN·N·LAG			
V	D	AMB		V	D	AMB		V	D	AMB		V	D	AMB		V	†	D	AMB	
VI	D			VI	D			VI	D			VI	N			VI	N			
VII	D	CANTLI		VII	D			VII	SAMON	PRINI	LOVD	VII	D			VII	D			
VIII	D	CANTLI		VIII	D			VIII	D	DVMANI		VIII	D			VIII	D			
VIIII	D	CANTLI		VIIII	D			VIIII	MD	SAMONI		VIIII	D			VIIII	D			
X	D			X	D			X	D			X	†	[D		X	D			
XI	D	AMB		XI	[D]	AMB		XI	D	AMB		XI	†	[D	AMB	XI	[D]	AMB		
XII	D			XII	[D]			XII	D			XII		[D		XII	[D]			
XIII	D			XIII	[D]			XIII	D			XIII		[D		XIII	[D]			
XIIII	D			XIIII	[D]			XIIII	D			XIIII		[D		XIIII	[D]			
XV	D	TIOCOBR[E]XT		XV	[D	T]IOCOBREXTIO		XV	D	TIOCOBREXT		XV		[D	TIOCOBREXTIO]	XV	[D	TIOCOBREXTIO]		
[ATENOVX]				[ATENOVX]				ATENOVX				[ATENOVX]				[ATENOVX]				
I	[D		]	I	[D]			I	D			I	[D		]	I	[D		]	
II	[D		]	II	[D]			II	D			II	[D		]	II	[D		]	
III	[D	AMB	]	III	[D]	AMB		III	D	AMB		III	[D	AMB	]	III	[D	AMB	]	
IIII	[N	INIS	R]	IIII	[N	INIS	R]	IIII	N	INI	[R]	IIII	[D	INIS	R]	IIII	[N	INIS	R]	
V	[D	AMB	]	V	D	AM		V	D	[AMB	]	V	[D	AMB	]	V	[D	AMB	]	
VI	[D		]	VI	†	D		VI	[D		]	VI	[D		]	VI	[D		]	
VII	[D	CANTLI	AMB]	VII	D	AMB		VII	[D	SAMON	AMB]	VII	[D	AMB	]	VII	[D	AMB	]	
VIII	[D	CANTLI	]	VIII	D			VIII	[N	SAMON	INIS	R]	VIII	[D		]	VIII	[D		]
VIIII	†	[D	CANTLI	VIIII	D	AM[B	]	VIIII	[N	SAMON	INIS	R]	VIIII	[D	AMB	]	VIIII	[D]	AMB	]
X	D	[	]	X	D	[	]	X	[D		]	X	[D		]	X	D			
XI	D	[AMB	]	XI	D	AM[B	]	XI	[D	AMB	IVOS]	XI	[D	AMB	]	XI	[D]	AMB	]	
XII	D	[	]	XII	D	[	]	XII	[D		IVOS]	XII	[D		]	XII	D			
XIII	†	D	AMB	XIII	†	D	AMB[	XIII	[D	AMB	IVOS]	XIII	[D	AMB	IVOS]	XIII	†	D	AMB	
XIIII	†	D	IVO	XIIII	†	D	[	XIIII	[D		IVOS]	XIIII	[D		IVOS]	XIIII	D		IVO	
DIVERTOMV				[DIVERTOMV]				[DIVERTOMV]				[DIVERTOMV]				DIVERTOMV				

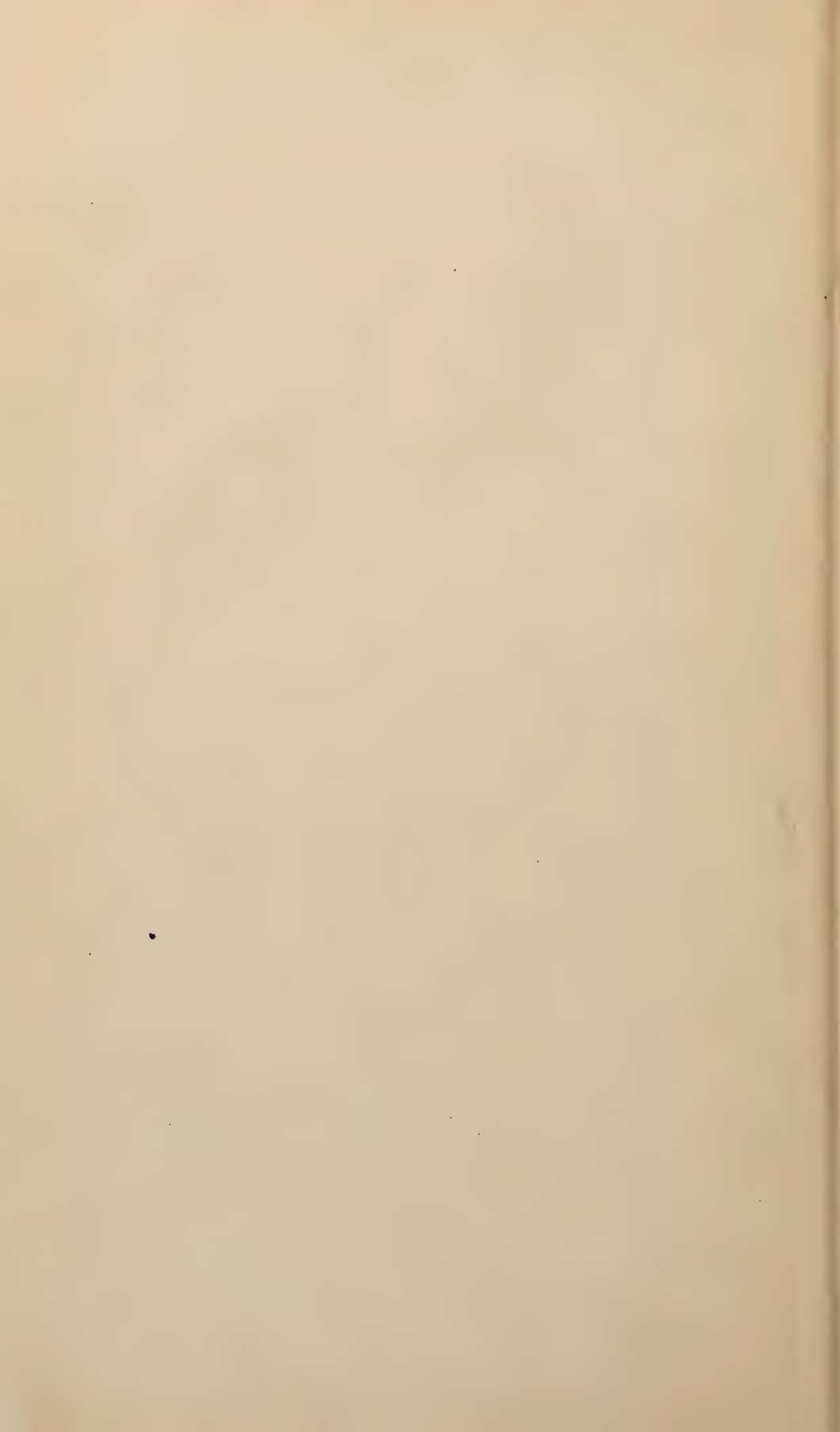
## NOTES

Year 1. Day 1: For D read MD. Days 7, 8, 9: CANTLI indicates that the displacement at these dates, consequent on intercalation, which affects the preceding 12 months, has ceased to operate, and that these dates have their normal office or function. In the same sense, I have supplied CANTLI at the corresponding dates in the Atenoux. Aten. 14: Here also CANT may be taken to indicate that the IVOS is proper to this month and is not transferred to it by intercalary displacement.

Year 3. IVOS at days 1, 2, and 3, and the whole notation of days 7, 8, and 9, are derived by intercalary displacement from Samonios. I have accordingly supplied from Samonios the notation IVOS at Aten. 11, 12, 13, 14, and the whole notation of Aten. 7, 8, and 9.

Year 5 has IVOS in Aten. 13 and 14 only, whereas Edrin. in year 1 has IVOS by displacement in Aten. 13, 14, and 15. Lack of material leaves it uncertain how displacement operated in respect of the last days of the month as between months of 30 days and months of 29 days.

The notation of this month is affected by intercalary displacement in year 3 only.





## IX. ADDITIONAL NOTES

Since my own efforts to study the structure of this Calendar were stimulated and assisted by the communications from Dr. Fotheringham printed by Rhys in his two papers on the Calendar—"The Coligny Calendar" and "The Celtic Inscriptions of Gaul: Additions and Corrections," Proceedings of the British Academy, vols. IV and V,—I submitted an advance proof of the present paper to Dr. Fotheringham with a request for his criticism. To this request Dr. Fotheringham very kindly and promptly replied, and, though his reply was intended to direct my own attention to defects and difficulties in my argument, I have thought it well to follow the example of Rhys by including in an appendix to this paper a number of extracts from the letter. They deal with matters which, without special knowledge, I am not qualified to discuss. I feel that, having received these criticisms, I should not be justified in publishing the paper without taking account of them. I have made some changes which seemed to be necessitated by Dr. Fotheringham's comments, but a fuller recension in accordance with his criticisms is obviously work for an expert.

There is one fact stated by Dr. Fotheringham which I ought not to leave out of present consideration, since it affects in some measure my general argument regarding the chronographic basis of the Calendar: "The moon should on an average be full a few hours before sunset at the end of the thirteenth day from appearance, but it would be natural to regard the night between the thirteenth and fourteenth days as the night of full moon, and, if the days are reckoned from sunset, to call the fourteenth day the day of full moon." My argument accepts as authentic Pliny's statement that the druidical months began on the sixth day (from appearance) of the moon. On this basis, the average and conventional date of full moon should be eight days later, that is, on the ninth day of the druidical month; whereas I have taken the eighth or middle day of the first half of the month to be the conventional date of full moon in the Coligny Calendar. I think that there are good reasons for adhering to the view that the eighth of the month was regarded in the chronography of the Calendar as the mean date of full moon. Every month was divided into a bright half, always 15 days, and a dark half, 15 or 14 days, this division being signified by the name *atenoux*, "afternight," which appears throughout as heading to the second half. Such a division can only have reference to the extent of moonlight in each halfmonth, and should therefore imply that the mean date of full moon fell in the middle of the bright half, that is, on the eighth day. But, since the distance of full moon from full moon is approximately  $29\frac{1}{2}$  days, it must follow that, in any succession of months of 29 and 30 days, the actual time of full moon would be anticipated to fall sometimes on the date preceding, sometimes on the date following, the conventional mean date. Thus the seventh, eighth, and ninth days in each halfmonth form a triduum of which the notation, as I have shown, is subject to "intercalary displacement." If the conventional date of full moon had been the ninth, we should expect the eighth, ninth, and tenth days to be grouped together; but the Calendar shows no such grouping. To explain the eighth

as the conventional mean date, I make two alternative suggestions. The date which Pliny calls *sexta luna* may have been the seventh day of the moon in the druidical reckoning; that is to say, Pliny may have stated the date from the Roman standpoint, joining half of the night with the preceding sixth day, whereas the Druids would have joined the whole night with the following day. Alternatively, the Druids themselves may have reckoned the average time of full moon to be before, not after, sunset at the end of the thirteenth day from appearance, and accordingly may have regarded the thirteenth day as the day of full moon.

On page 28 above, I have said that the mechanical apparatus of this Calendar was borrowed from Greek culture. This is said with reference to a note from Dr. Fotheringham in Rhys's paper, Proceedings of the British Academy, vol. V, p. 95. My photographs show that, so far as the material is extant, a little to the left of every numeral indicating a diurnal date there was a small circular hole perforated in the bronze plate. These holes are in vertical alignment, and the lines of fracture of the fragments are in many places determined by them, just as cheques and postage-stamps are made easily detached by lines of perforation. A few years later than the discovery of the Coligny fragments, certain fragments of Greek calendars were discovered at Miletus, and in them similar holes were found perforated. It appears that such holes were technically called *πυκλίσκοι*, and that they were made to hold a moveable peg called *παράπηγμα*, in Latin *clavis anni*. A calendar thus provided seems also to have been called a *παράπηγμα*, much as a clock takes its name from one part of its apparatus, the bell on which the hours are sounded. For further details regarding the use of the holes and pegs, and for references to other papers in which the matter is discussed, I can only here refer the reader to Dr. Fotheringham's note above mentioned. The Miletus fragments show that the Celtic chronography of a district in the interior of Transalpine Gaul was not isolated from Greek influence. While I argue hence the probability that the Greek cycle of 19 years and the associated minute computation of the relation of lunar months to solar years were not likely to have remained unknown to the Gallic druids, I attach no evidential value on this point to the passage from Diodorus, quoted by Rhys, Proceeding of the British Academy, vol. IV, p. 81. Diodorus quotes from Hecataeus of Abdera (floruit 332 B. C.) to the effect that in an island of the ocean, lying over against the Celtic land and not smaller than Sicily, Leto was born and her son Apollo was honoured there above all other gods, and that once in every nineteen years, when the courses of the stars were completed, Apollo made a visible appearance in the island. The story belongs to a body of legends glorifying Apollo, and, though it proves that Hecataeus had some kind of notion of the meaning of the nineteen-year cycle, it cannot be held to prove that this cycle was known to the Celts of his time or to the islanders who dwelt beyond them in the ocean. It is interesting, however, to note that Hecataeus speaks of this island as inhabited, not by Celts, whom he knew as inhabiting the adjacent mainland, but by "Hyperboreans," a general name in early Greek literature for the unidentified peoples of northern Europe dwelling beyond the known Celts and Scythians; also that the islanders, according to Hecataeus, had a distinct language of their own (*ιδίαν τινὰ διάλεκτον*). We

may be permitted to see here a reflexion of the same Celtic tradition which comes to us through the Greeks in the terms ἡ Πρεττανική and νῆσοι Πρεττανικαί, meaning properly "Pictland" and the "Pictish Islands." It seems clear that Hecataeus, in the fourth century B. C., did not know these islands to be inhabited by Celts or their language to be Celtic. His evidence, as far as it goes, confirms the argument, outlined in my "Phases of Irish History" and adopted by the leading authorities on Irish archaeology, that the colonisation of Britain and Ireland by the Celts did not begin earlier than the fifth century B. C., and that the theory, voiced by D'Arbois de Jubainville and Rhys, of a much earlier "Goidelic" invasion and conquest has no basis in history or archaeology.

Notes by Dr. Fotheringham:

Page 14. "The earliest calendars . . . not less than thirty hours after new moon." Note: "'Thirty' is an understatement for the latitude of Bourg in Burgundy. According to the table which I gave in Monthly Notices of Royal Astronomical Society, LXX (1910) p. 530, if we assume that the moon is moving with her mean velocity in her mean orbit, the time that has to elapse before she can become visible in that latitude is 25 hours at the vernal equinox, 32 hours at the two solstices, and 47 hours at the autumnal equinox. The mean age when first seen will be 12 hours more. The median value should be about 1 day 20 hours, but the average will be rather more. The moon should on an average be full a few hours before sunset at the end of the thirteenth day from appearance, but it would be natural to regard the night between the thirteenth and fourteenth days as the night of full moon, and, if the days are reckoned from sunset, to call the fourteenth day the day of full moon."

"If the sixth day from first appearance was called the first [of the month] by the Druids, the fourteenth from first appearance would be called the ninth, not the eighth, by the Druids. The date of full moon measured from first appearance varies according partly to the varying interval between new moon and first appearance and partly to the varying interval between new moon and full moon. In the first case you have the difference between 25 hours and 47 hours, the extreme mean intervals before the moon has attained a position where she is visible. To this you must add 24 hours, as this position may be attained at any hour of day or night, making a difference between 25 hours and 71 hours in the age of the moon at first visibility. But the first of these must be diminished and the latter increased, because the moon may be either north or south of her mean position and may attain it in a greater or less time according as she is far from or near to the east. Then you have to add the difference in the interval between astronomical new moon and astronomical full moon if you wish to get the total difference in the interval between first appearance and full moon. I see from my Oxford University Pocket Diary 1924-5 that in the year Oct 1924 to Sept 1925 this interval varies between 13 days 17 hours 36 minutes and 15 days 13 hours 30 minutes. But you cannot make the moon move at her quickest between new moon and first appearance and also at her quickest for the average speed between new moon and full moon. There is, therefore, a limit to the combination of these inequalities. Anyhow, a variation of four days in the interval between first

appearance and full moon is quite within the range of possibilities. But you cannot have four days' variation for every month. At the vernal equinox you expect the full moon to be in the mean one day later as measured from first appearance than at the autumnal equinox."

With reference to this note, it seems relevant to recall Caesar's testimony that the Druids formed a kind of widespread corporation or university and that their central place for Gaul, where they held annual conventions, was *in finibus Carnutum*, in the neighbourhood of Chartres. Unless we suppose that they made separate observations and reckonings for calendar purposes in various places, which seems to me unlikely, we might expect that the chronography of a druidical calendar would be based on the latitude of Chartres rather than on that of Bourges. But again, "disciplina in Britannia reperta atque inde in Galliam translata esse existimatur, et nunc, qui diligentius eam rem cognoscere volunt, plerumque illo discendi causa proficiscuntur." In these words, Caesar is obviously reporting information acquired from Gauls, probably from the Druids themselves, one of whom, Diviciacus, was his friend. By his "Brittania" we must understand *ἡ Πρετανική* or the *νῆσοι Πρετανικαί*, "the Pictish country or islands," comprising both Britain and Ireland; for, so far as we know, Caesar himself was the first writer who gave this name the form "Brittania" and limited its application to the larger island. I stress this point because there is much to indicate that Ireland rather than Britain was the home of Druidical teaching, and I have ventured to explain the names of the months Equos and Elimbiv(ios) as distinctively Irish-Celtic—I avoid the anachronistic word "Goidelic." There is thus also the possibility that the Druids had a common chronography for Ireland, Britain, and Gaul, based on the latitude of some centre in Ireland or Britain. Dr. Fotheringham's note suggests an additional or alternative explanation of the groups of three days in each halfmonth which, in my argument, are identified with the times of full moon and new moon. I wonder whether the peculiar sequence of the "full" and "hollow" months of the Coligny Calendar was planned in view of observed variations in the lunar dates. Beginning with the month of the summer solstice, Samon(ios), the lengths of the months are in days as follows:

30, 29, 30, 29, 30, 30, 29, 30, [29], 29, 30, 29.

I have shown reason to think that the ninth month, Equos, was traditionally of 29 days, but was varied for calendar purposes so as to contain sometimes 28 and sometimes 30 days.

Page 14, footnote. "The three days or two days for the summer solstice is not wholly explicable in the way that you suggest. Columella in giving two days couples them with 'vel,' implying that they are alternatives; no doubt he or his authority thought that the summer solstice varied between two days of the calendar year. Thus at present in leap year and the following year it falls on June 21, while in the two years preceding leap year it falls on June 22. Where Columella allows three days he implies that the solstice endured through all three days. The meaning of this will be apparent if we consider what the solstice is. For six months of the year the sunrise point travels steadily in a northerly direction, then halts, and turns southwards for the next six months. The solstice is the point where the sun halts in his northward journey. But, since the change is slow, he may appear to halt for three days.



Three days is really a very short allowance for the interval during which the change in the position of sunrise is negligible. Clearly in a lunar calendar there would be a variation of a month, not of a day, in the calendar date of the solstice, but the three days' duration of the solstice would not be affected by the character of the calendar."

"What I have written about the solstice affects the first paragraph of page 20."

Page 16. "I think it most unlikely that the Celtic calendar preserved the older Indo-European tradition, if it is true that it reckoned the month from the sixth day [of the moon's visibility]. It is most natural to begin the month or moon when the moon is first seen. All lunar calendars known to me aim at beginning in the neighbourhood of new moon, except a group of Indian calendars which begin at full moon. If the Celtic calendar really began on the sixth day, it must be regarded as a peculiarity."

Page 20: date of the summer solstice. "To be exact, June 21 in leap year and following year, June 22 in the two years preceding leap year. In a work to be published in leap year, I should stick to June 21."

Page 20, second paragraph. "I do not follow this. A lunar date for the solstice is necessarily artificial. The Babylonian star calendars used to place all solstices and equinoxes on the 15th day of the month, i. e. at full moon. The 17th of a month beginning with the sixth day from the appearance of the moon would be a week later. But, if the Coligny Calendar was independent of the Julian, there is nothing in the difference between two artificial dates, Samonios 17 and Juni 24. Remember that the beginnings of the Julian months are quite artificial and do not correspond to anything in nature. If our June 22 was the standard Samonios 17, the standard Samonios would begin five days later than our June. If we call the standard Samonios 17 June 21, then the standard Samonios began four days later than our June."

I shall endeavour to make my meaning clearer. An intercalated lunar calendar containing a date for the summer solstice (here Samonios 17, *trinux Samoni*) implies the notion of a "standard year" in which this date should coincide with the solstice. I assume that a like notion existed in the minds of those who regulated the Roman calendar while it was still a lunar calendar, and that any ritual observance connected with the solstice would have been assigned to a certain day or number of days having a fixed place in the midsummer month. In other words, the conventional celebration of the solstice or of any rite associated with the solstice would be held when the midsummer moon was so many days old. If the Druidical date was the seventeenth day of the midsummer month or thereabouts (for *trinux* implies a range of three days) and if the Roman date was the twenty-second or thereabouts, it follows that the Druidical month began about five days of the moon's age later than the beginning of the Roman month; and thus the date Samonios 17 for the solstice seems to show the Coligny Calendar in accord with Pliny's statement that the Druids began each month on the sixth day of the moon. This view supposes a common early Italo-Celtic tradition associating the solstice for ritual purposes with a particular age of the moon.

All intercalated calendars imply the notion, more or less definitely formed, of a standard year, that is, a year in which a certain solar event, a certain

stage in the sun's course, such as one of the solstices or one of the equinoxes, is equated with a certain age of the moon. Such calendars also imply the idea of a year consisting of so many lunar months, normally twelve, with intercalation thirteen. (It occurs to me that primitive tradition, at least among some peoples, may have refused express recognition of a thirteenth month. The Greeks duplicated one of the twelve months, and the Coligny Calendar makes up its intercalary months, day by day, with days taken from the twelve months in turn.) The notion of the standard year must have had regard to some particular phase of the sun's course. I suggest that the determinant solar factor for the standard year was likely to have been the summer solstice, when the sun's course took in the widest horizon, the sun reached its highest meridian altitude, and the days were longest; but I cannot suggest a reason for standardising this phase in the beginning of the moon's fourth quarter. The Babylonians, Dr. Fotheringham has pointed out, standardised it at full moon. Possibly the equation was connected with some mythical relation between the solar and lunar deities.

Page 21, first paragraph. "August 2rd is right if you adopt June 21 as date of solstice. It should be August 3rd if you adopt June 22."

Page 30. " $10,956\frac{1}{2}$  should be 10,955.8. The divergence is therefore 1.7 day in 30 years. I should not say that the Julian calendar ever went astray. We are apt to assume that the tropical year, from mean equinox or solstice to mean equinox or solstice, is the true year, and to call calendars erroneous that do not agree with this. There are, however, other annual astronomical phenomena which would give us years of slightly different length. As Caesar was ignorant of these differences, he was not called on to select one type of year rather than another, but I am certain that, if he had known of the different types of year, he would have selected a year which would keep the heliacal rising of Sirius true to the same date. His calendar was constructed on the advice of the Egyptian astronomer Sosigenes, and the Egyptians had for thousands of years treated the Sirius-year as the true astronomical year and observed the annual rising of Sirius. Now the Julian year is the correct Sirius-year, and I do not see that the Sirius-year is essentially inferior to the tropical year."

Page 30. "In the nineteen-year cycle, the divergence amounted only to about 1 day in three centuries." Dr. Fotheringham remarks: "Divergence from what? Do you mean that the Callippic cycle, a particular type of 19-year cycle, permits the calendar new moons to move one day away from the true new moons in three centuries? If so, your statement is correct, but that is not due to a defect in the system of 7 intercalations in 19 years but to the adoption of an incorrect value for the mean lunar month. The 7 intercalations in 19 years are practically perfect. Until you have determined what type of year you want, you will not be able to decide whether you want a minute fraction more than 7 or a minute fraction less than 7 on an average. You must also remember that both the lunar month and the solar year are slowly getting shorter, and will continue to do so unless some engineers carry out works which will affect the tides in the Irish and Behring Seas."

Pages 31, 32. "Rhys did not draw my attention to the fact that the two intercalary months were in different positions. In all other calendars that

I know, with the exception of the Babylonian, there is either one fixed position for an intercalary month, or an intercalary month may occur at any point in the year. The Babylonian cycle of 19 years did not contain four intervals of  $2\frac{1}{2}$  years and three of 3 years, but four intervals of 3 years, two of  $2\frac{1}{2}$  years, and one of 2 years."

I should remark that the sole attested interval in the Coligny Calendar is of  $2\frac{1}{2}$  years, and that my argument, showing reason to think that an interval of 3 years was also employed in it, does not preclude the possibility of an interval of 2 years.

Dr. Fotheringham says in conclusion: "I dare not say whether your reconstruction of the principles of the Calendar is right, but it is at any rate most interesting."

During the printing of this paper, the paper on "Les Graffites Gaulois de la Graufesenque" (Rev. Celt. XLI, 1 ff.) by Professor J. Loth came to me. This collection of forty-three invoices, as we may call them, graven in Gaulish on pieces of pottery, may well be regarded as forming a single document and, so regarded, they form a monument of Celtic language closely comparable in extent, antiquity, and linguistic and historical value with the Calendar of Coligny. Their estimated date, based on the style of the pottery, is from A. D. 60 to A. D. 80.

The graffiti resemble the Calendar in a number of respects. They use the Roman alphabet and the Roman system of numeration. They preserve the same traces of the older Gaulish orthography, based on Greek. Celtic *u* is normally represented by *u*, but the personal names *Lousios* and *Vinoulus* are found, and the name *Summacos* appears to represent the Greek Συμμαχος. In names adopted from Latin, the nominative desinence in *-us* of *o*-stems is usually changed to Gaulish *-os*: *Albanos*, *Ma(n)suetos*, *Secundos*, etc. But the Latin desinence is also used, *Albanus*, *Ma(n)suetus*, *Secundus*, etc.; and both desinences are sometimes found in a single inscription. The letter *x* has its Latin value in *svexos* 'sixth' = Irish *sess-ed*, Welsh *chwech-ed*, but its Greek value in *sextametos* 'seventh' = Irish *sechtmad*, *oxtumetos* 'eighth' = Irish *ochtmad*. Fragment 43 shows the Latin verb *incepit*. Thus the graffiti exhibit a stage of Latin influence definitely more advanced than in the Calendar, not necessarily however a later stage in time, for the Calendar is a culture-product written by the learned for the learned, whereas the graffiti belong to a branch of commerce which had extensive dealings with the Roman army.

In the graffiti, as in the Calendar, the nominative masculine desinence *-os* is sometimes shortened to *-o*: *Masueto*, *Trito*, *Priuato*, *Summaco*, *tudo*, etc.; and this I think likely to represent an alternative in actual speech. As the Calendar shows *innis*, *prinni*, *Dumannni*, beside *inis*, *prini*, *Dumani*, so the graffiti show *Sumaco*, *Casidani*: *Cassidanno*, *Agedilio*: *Agedillios*, *catilli*: *catili*, *pannas*: *panas*.

So far as the evidence justifies comparison, I think that the Calendar and the Graufesenque graffiti may be regarded as nearly of the same date.

EÓIN MAC NEILL

## THE DINDSHENCHAS IN THE BOOK OF UÍ MAINE<sup>1</sup>

THE date of this manuscript and the name of one of the principal scribes are determined by two notes, quoted by Mr. Purton in the unpublished catalogue of MSS in the Royal Irish Academy.

1. At foot of f. 111 [55] v<sup>o</sup> 2, in the hand of the text.

*Faelán mac a(n) Gabann na scel do srib in caidirni seo da thigerrna carad companaig .i. don easpug ua Cheallaigh (.i. Muircertach), 7 co fogna do, 7 na tabradh da charaid in caidirne seo.* Mr. Purton notes 'This must be the Faelán mac an Gabhann, saoi senchadha, whose death is recorded by the Four Masters anno 1423'. (Cf. ZCP. xii 358, note.)

2. f. 170 [111] v<sup>o</sup>, lower margin, in the same hand, there is a note, partly obliterated

... *Muircertach mc Pilip mc Maine mc Donnchadha Munnigh do thogha do cleircib Connacht i n-airdeaspug a Tuaim da Ghualann iar roctain orchraais (?) ... fa oirmidin a heaspoideacht Cluana Fearta amhail adbeart an t-eolach an t-en-rann ... 'ar minn (?) mor luaigh robeag leam cuigidh do qinn (?) cuigil as fearr ni fhaguim'* 'Muircertach O'Kelly elected by the clergy of Connaught as Archbishop of Tuam, being, to his regret (?), promoted from the see of Clonfert',<sup>2</sup> etc.

This copy of the Dindshenchas differs in certain respects from all others. It is arranged as follows.

- 1 (f. 143 r<sup>o</sup> 1.) Temair: The prose section *Seanchas dind Ereann*, as in Rev. Celt. xv. 277.
- 2 The poem *Teamhair, Taillti, tir n-aénaigh* (= Temair V, Metr. Dinds. i. 38.)

<sup>1</sup> Read before the Royal Irish Academy Feb. 9th, 1925.

<sup>2</sup> In 1394. He died in 1407; see O'Donovan, Hy Many, 48 note h.



- 3 Prose: *Teamhair .i. mur Tea*, etc., as in Rev. Celt. xv. 277, 278 § 1-4.
- 4 (f. 143<sup>1°</sup> 2.) Poem: *Teamhair Bregh cidh ní diata* (= Temair I, Metr. Dinds. i. 2.)
- 5 Mag mBreagh: Prose, with a quatrain at the end: see Bodleian Dinds. 2, Rev. Celt. xvi. 62.
- 6 Prose: *Da dingnaibh na Teamhrach andseo*, etc., as in Rev. Celt. xv. 280-284 § 5-42.
- 7 (f. 143<sup>v°</sup> 2.) Poem: *Dabeir maisi dona mnaib* (= Temair II, Metr. Dinds. i. 6.)
- 8 (f. 144<sup>1°</sup> 1.) Poem: *Teamhair togha na tulach* (= Temair III, Metr. Dinds. i. 14.)
- 9 (f. 144<sup>1°</sup> 2.) Poem: *Domhan duthain a laindi* (= Temair IV, Metr. Dinds. i. 28.)
- 10 (f. 144<sup>v°</sup> 1.) Duma nEirc: prose and poem, (= Achall, as in Rev. Celt. xv. 289, Metr. Dinds. i. 46.)
- 11 (f. 144<sup>v°</sup> 2.) Rath Essa: prose and poem, as in Rev. Celt. xv. 290, Metr. Dinds. ii. 2.
- 12 (f. 145<sup>1°</sup> 1.) Brug na Boinde: prose, *Da dingnaibh an Brogha*, with poem *An sin a Bruigh* (Rev. Celt. xv. 292; Metr. Dinds. ii. 10.)
- 13 The same, prose, *Senchus an Bhrogha*, with poem *A chaemhu Breagh* (Rev. Celt. xv. 292, Metr. Dinds. ii. 18.)
- 14 (f. 145<sup>v°</sup> 1.) Inbhear nAilbhine: prose as in Rev. Celt. xv. 294, poem as in M. Ds. ii. 26.
- 15 (f. 145<sup>v°</sup> 2.) Oc(h)and Mig(h)i: prose as in R. C. xv. 295, poem as in M. Ds. ii. 36.
- 16 (f. 146<sup>1°</sup> 1.) Midhi: prose as in Bodleian Dinds. no. 7 and R. C. xv. 297, poem as in M. Ds. ii. 42.
- 17 Druim n(D)airbrech: prose as in R. C. xv. 298, poem as in M. Ds. ii. 46.
- 18 (f. 146<sup>1°</sup> 2.) Boand: prose as in Bodleian Dinds. no. 36, with final quatrain.
- 19 Sinand: prose in the main as in Bodl. 33 and R. C. xv. 456, poem as in M. Ds. iii. 286.
- 20 (f. 146<sup>v°</sup> 1.) Boand: prose repeated with minor differences, poem as in M. Ds. iii. 26.
- 21 (f. 146<sup>v°</sup> 2.) Cnodba: prose with quatrain, as in Bodl. 43.
- 22 Muiriasc: prose with three quatrains, as in Bodl. 44.

- 23 Druim Suamaig: prose with quatrain, as in Bodl. 45: also short poem, as in M. Ds. iv. 238.
- 24 (f. 147<sup>r</sup> 1) Taillti: prose with quatrain, as in Edinburgh Dinds. 68.
- 25 Tlachtga: prose with quatrain, as in Edinb. 73.
- 26 Eithne (Carn Furbaide): prose with quatrain, as in Bodl. 8.
- 27 (f. 147<sup>r</sup> 2) Bri Leith: prose with quatrain, as in Bodl. 9.
- 28 Teafa: prose and stanza, as in Bodl. 13.
- 29 Loch Aindind: prose with quatrain, as in Bodl. 14.
- 30 Lusmag: prose with quatrain, as in Edinb. 71.
- 31 Bend Codoil: prose with quatrain, as in Edinb. 72.
- 32 (f. 147<sup>v</sup> 1) Inber Cíchmaine: prose with quatrain, as in Edinb. 74.
- 33 Loch n(G)abair: prose in the main as in R. C. xvi. 58, with quatrain.
- 34 Loch Ri: prose as in Edinb. 55 (Loch nEchach), with poem (see M. Ds. iii. 560.)
- 35 Dubthir: prose with quatrain, as in Bodl. 37.
- 36 (f. 147<sup>v</sup> 2) Laigin: prose as in R. C. xv. 299, with two poems, as in M. Ds. ii. 50, 52.
- 37 Mag Lifi: prose with quatrain, as in Bodl. 4: cf. R. C. xv. 303.
- 38 Loch Garman: prose as in Bodl. 5, but instead of quatrain the poem as in M. Ds. iii. 168.
- 39 (f. 148<sup>r</sup> 2) Sliab Bladma: prose as in R. C. xv. 301, with quatrain as in Bodl. 11.
- 40 Fid nGaible: prose as in R. C. xv. 301, and poem as in M. Ds. ii. 58.
- 41 Mag Lifi: prose as in R. C. xv. 303, poem as in M. Ds. ii. 60.

From this point to (f. 169<sup>v</sup> 2) Lége the arrangement agrees closely with that followed by the Rennes MS. (R) and the Book of Ballymote (B), and the text of both prose and poems is fundamentally the same. In the final volume of the Metrical Dindshenchas I hope to print a table which will exhibit the peculiarities of arrangement in these and other MSS. belonging to the same recension. I will only note here that on f. 158 *verso*, after Ath Luain, a later hand has entered (1) a poem on the dindshenchas of Tuaim Dá Gualainn, now almost entirely illegible: (2) a second copy of Temair I: (3) the poem on Ath Liag Finn (see M. Ds. iv. 36, first version).

The dindshenchas of Lége on f. 169r<sup>o</sup> 2 is followed by a number of poems, some of which do not belong to the Dindshenchas, while those which do are out of place.

These poems are:

- 1 (f. 169v<sup>o</sup> 2) *A caithir naem comall ngle*, the dindshenchas of Aenach Uchbad and Ath Salach; this I hope to publish in the fifth volume of M. Ds.
- 2 (f. 170r<sup>o</sup> 1) *Tath aenfir ar iath Maineach*: poem in 76 stanzas on the rule of William O'Kelly over Hy Many.
- 3 (f. 170v<sup>o</sup> 2) Poem: *Aileach Frigrenn*, see M. Ds. iv. 106 (Ailech III).
- 4 (f. 171r<sup>o</sup> 1) *Connacht craed ma bhuil in t-ainm?* poem in 16 stanzas on the origin of the name of Connaught: cf. LL. 27 a 1.
- 5 (f. 171r<sup>o</sup> 2) *Leach(t) Cormaic mic Cuilendan*: poem in 41 stanzas on foreign graves in Leinster: cf. LL. 43 b 7.
- 6 (f. 171v<sup>o</sup> 1) Poem: *Tri croind Érenn*: ed. Meyer, ZCP. v. 21.
- 7 (f. 171v<sup>o</sup> 2) Poem on Loch Riach, as in M. Ds. iii. 324.
- 8 (f. 172r<sup>o</sup> 1) Poem by Gilla-na-naem ODuind, which is described below.

It will be seen that the Book of Uí Maine's Dindshenchas, which I refer to as M, conforms in the main to the Rennes-Ballymote recension (called C by Thurneysen in his *Helden- und Königsage* i. 46), to which belong also the copies referred to in my *Metrical Dindshenchas* as LcYSS<sub>2</sub>S<sub>3</sub>H. But M has certain peculiarities:

- (1) in the arrangement of the opening sections,
- (2) in a long interpolation between *Druim Dairbrech* (17, above) and *Sliab Bladma* (39),
- (3) in the appendix at the end.

1. M agrees with a group of manuscripts (SS<sub>2</sub>S<sub>3</sub>H) belonging to the Rennes-Ballymote recension in placing the poem *Temair, Tailtiu, tír n-oenaiḡ* (Temair V) immediately after the introductory prose section *Senchas dind nÉrenn*. This is followed in M by the prose section *Temair i. mór Tea*, after which comes the poem Temair I.

The Bodleian-Edinburgh recension agrees with MSS<sub>2</sub>S<sub>3</sub>H as to the order of the first two items, but omits Temair I and places next the prose of Mag mBreg. M agrees with Bd.-Ed. in thus

associating Mag mBreg with Temair, whereas in all other manuscripts of the Rennes-Ballymote recension Mag mBreg is placed in quite a different part of the series. Also M's text of this article is nearer to Bd.-Ed. than to R B etc. This may be shown by comparing the three versions of the last few sentences.

R B (see Rev. Celt. xvi. 62): Boí cairdes do suide frisin Mor-righain 7 rogaid di tabairt na himana co Mag mBolgaidhe, ar rop edh ainm in maighi o thus, 7 rochar Brega dano, dam Dile, in magh sin 7 folil a ainm de. *Unde Mag Breg.*

Bd. § 2 (Folk-Lore iii. 470) Robo dual do side in Morrigan 7 rogaid-sium di tabairt do na himana sin co mbeith im-Maig Olgaide .i. cetna ainm in muigie, 7 rochar Brega in mag sin. *Unde Mag mBreg dicitur.*

M: Daba dual dosan an Morrigan 7 dochuaidh-siun da tabairt leis cona himain co mbeith i Mag Eolgaidi .i. cetna ainm an mhuigie. Conad desin ainmnichear Mag mBreg.

The sentence about Breoga mac Breogoin, which stands first in R, is placed last in Bd. and M.

2. The order of numbers 7—17 (Temair II—Druim Dairbrech) of M's contents, as above, agrees (with minor differences in S<sub>3</sub> H) with that of the other members of the Rennes-Ballymote recension. But after no. 17 the order is broken in M by the insertion of numbers 18—38, as above. With 39 the normal order is resumed and continues as already explained. We have thus an interpolation of 21 items, which with a few exceptions are in prose with only a final quatrain: the exceptions being no. 19, Sinand; no. 20, Boand; no. 23, Druim Suamaig; no. 34, Loch Rí; no. 36, Lagin; no. 38, Loch Garman: in these the prose is followed by a poem. Of the 21 prose versions, all but one are found in the Bodleian-Edinburgh recension. The one exception is Loch nGabair, the text of which is much as in R (see Rev. Celt. xvi. 58), but with some differences, and with a final quatrain, which is a characteristic of the Bodl.-Ed. recension. It may have belonged to the part of that recension which seems to be missing from the two extant manuscripts (see Thurneysen, Heldensage, 43). But it is not found in the LL Dindshenchas.

In the other twenty interpolated numbers, the text agrees more or less closely with that of the Bodleian and Edinburgh copies, except in the case of Lagin, which is practically word for word as



in R, and differs widely from Bd. 3. In all the other articles the text of M usually agrees with Bd.-Ed. where these differ from R. Note that the prose of Mide (no. 16) also agrees in several points with Bd.-Ed. against R, though in other points the relations are reversed. I give here in summary the result of a collation of the interpolated prose articles in M with L. (Book of Leinster), Bd. (or Ed.) and R.

*Bóand.* M Bd. seem to be expanded from R. M R have one phrase not in Bd.: R Bd. have one phrase not in M. This item is not in L.

*Sinann.* M is nearer to R than to Bd., but has one clause as in Bd., not in R. Most of this article is missing in L, which however preserves the final sentence and stanza as in Bd.

*Bóand* (bis). As above, with slight variations.

*Chogba.* Agrees closely with Bd. Not in L R.

*Muiresc.* As in L Bd., except for scribal errors. R differs widely.

*Druim Suamaig.* L Bd. differ very slightly. M follows them, with modifications. R differs somewhat from these three.

*Tailliu.* As in Ed. R differs considerably, adding several sentences. Not in L.

*Tlachtga.* As Ed., almost verbatim. R is very similar. Not in L.

*Eithne* (Carn Furbaide). Title and text as in Bd. R's Carn Furbaide differs widely. Not in L.

*Bri Léith.* As Bd. R has one sentence different. Not in L.

*Tethba.* As Bd., but has one clause as in R, differing from Bd., and omits one clause which R Bd. both have. Not in L.

*Loch Aindind.* As Bd., except for one sentence which agrees with R. But R differs considerably. Not in L.

*Lusmag.* As Ed. R adds two lines. Not in L.

*Benn Codail.* As Ed. M Ed. represent a corrupt state of the R-text, and they add the clause *nó ní d'enlaith*, etc. Not in L.

*Inber Cichmaine.* As Ed., but has the last clause of R, which seems to be accidentally omitted from Ed. Not in L.

*Loch Gabar.* As R. Not in L Bd. Ed.

- Loch Rí* and *Loch nEchach*. As Ed., with a few variants. R (79 and 141) separates the legends of Eochu and Rí, and tells them differently. Not in L.
- Dubthir*. As L Bd., but omits *ar thagnacht*. R differs widely.
- Lagin*. As R, word for word. Bd. differs widely. L is much shorter than the other three.
- Mag Lifi*. Nearly as Bd. But Bd. R have a clause which M omits. R adds a clause which the rest omit. L agrees with Bd. except in the final clause, and adds a sentence which the other three omit.
- Loch Garman*. As L Bd. but with one sentence different. Agrees with Bd. in adding *foglaid*, which L omits. R is wholly different.

Thus while M generally agrees with Bd.-Ed. where they differ from the R-family, there are particular cases where the relation is reversed, and also some where R agrees with Bd.-Ed. against M. We must therefore assume a common ancestor which is represented by the readings which any two of the three branches agree in against the third.

I hope to discuss the relations of the three with L in the final volume of the Metrical Dindshenchas.

3. The appendix to the Dindshenchas in M ends with the long poem printed below.

The author gives his name in stanza 121 as Gilla na naem ODuind, the date of writing as 5360 years from Adam (st. 114), or 1166 A D (st. 115): and the place as Inis Clochrand (i. e. Inis Clothrann, in Loch Rí).

In spite of the discrepancy as to date, he is no doubt the Gilla na naem ODuinn whose obit is recorded in F M 1160: see O'Reilly, *Irish Writers* lxxv; Atkinson, *Book of Leinster*, Contents, p. 21a. Stanzas 111-113 speak of Toirdelbach, that is Turlough O'Brien, king of Munster, as lately deceased. According to the *Annals of Ulster* he was deposed in 1165, reinstated in 1166, and died in 1167. The Four Masters also record his death in 1167.

The poem consists of four parts, distinguished by large initial letters. As a rule one stanza is given to the legend of each place on the list. It is obvious that this list is arranged with an attempt at geographical coherence, even if it is not very systematically

carried out. The poet makes it clear in st. 38, 53 and 69 that this is his intention. Part I is mainly occupied with places in Meath or Westmeath. Part II (st. 38) deals with Ulster. Part. III (53) turns south to Leinster. Part IV (69) is occupied with Munster and Connaught. We have therefore a presumption that in the year 1166 a recension of the Dindshenchas was already in existence which was arranged in geographical sequence. O'Duinn cannot have had in view the LL recension, in which there is but little trace of such sequence; besides his list differs from the contents of the Leinster Dindshenchas both by what it includes and by what it omits. On the same grounds the Bodleian-Edinburgh recension must be excluded. Is his poem then based on the Rennes-Ballymote compilation? This has a geographical arrangement, which differs however from O'Duinn's both generally and in detail. Its order, roughly speaking is: Meath, Leinster, Munster, Connaught, Ulster, finally returning to Meath: and the several places in each province are taken in an order quite other than that of O'Duinn's poem.

As to the contents, the 97 places which O'Duinn mentions are all included in the Rennes-Ballymote Dindshenchas with the exceptions of Sliab Cua (73), Lige Fintain (83), Lecht Medba (101) and Findloch (104); while the legends of Cnogba (9) and Séig Mossad (71) appear only in later copies of that recension. Cnoc Tarbga (96) and also Findloch may be founded on a version of the ds. of Ath Luain somewhat different from that of R.-B. On the other hand 47 places included in R.-B. are passed over by O'Duinn. These omissions may be deliberate, as he says that he ends his list for fear of becoming tedious: which may mean either that he has material which he chooses to neglect, or merely that he wishes to convey an impression of his intellectual resources.

On the whole it is less likely that O'Duinn knew of a recension on a geographical basis, of which all other trace is now lost, than that he had before him an early draft of the Rennes-Ballymote Dindshenchas, whose contents he summarised, selecting and arranging at his own discretion. In that case this recension must be earlier than 1166, a date which accords pretty closely with Thurneysen's conjectural date 'rund um 1200': see his *Heldensage*, 45.

It is perhaps worth noting that the abbreviated form of the poem on Sliab Fuait printed in *Metr. Dinds.* iv. 166 is attributed in the final stanza to 'Ua Duinn' in the copies in LcSS<sub>3</sub>H, though the earlier form, which belongs in Thurneysen's opinion to the

oldest form of the LL recension (Heldensage, 39), omits this stanza. This may mean that O'Duinn had a hand in arranging the later recension, and took the opportunity to claim this poem as his own.

I print here in full his composition as it stands in M. It is in many places corrupt, and not always intelligible. I have supplied missing letters and syllables in brackets, but have not marked the expansion of contractions by italics, except where there seemed to be room for doubt. R = Rennes Dindshenchas (ed. Stokes).

## PART I

- 1 [f. 172 r°] Eri íarthar talman tortigh, úr Fhodka ina fhuinend  
alaínd a Dhe in Banba bhuidhi le tarba gach tuli thiar. [grían,
- 2 O rignaib tuaithe De Danann rodlíg ha anim<sup>1</sup> Inís Fáil,  
mna meic Cermada gu cuimne, deg-slata gar<sup>2</sup> tuillmed táin.
- 3 Ith is blícht sa Banba bhuídhí rosbennach Dia mor na mind;  
dligim a hurradus d' iarraidh, bunadas diamair a dind.
- 4 INeosat dar dhingnaibh Eirenn, bid eimheach rat(h)mar mo rus,  
aircedul bhus leir i leabhraibh, a reim o Teamraig ar tus.

*Temair.* See R I (3), M. Ds. i. 2.

- 5 Liathdruim ag tuat(h)aib Dé Danann, Druim Cain ag oireacht buan  
Cat(h)air Croind o cath Cearmna dar caill rath Teamraint ord. [Bolg:

*Temair.* See R I (1) Bd. I, M. Ds. i. 6.

- 6 Mur Tea Erimoin uasail, ingine Luigdeach nar lond,  
rath do Tea in tuaithi treabhair, conad uaithi Teamair throm.

*Mag Breg.* See R III (1), Bd. 2, M. Ds. iv. 190.

- 7 Athair deich mac mB(r)eoguind mbuidneach, a mbaile ar Maigh  
Breagh in buair  
im Cathair Croind gan cairdi o Boind gu farrgi fhuair.

*Bóand.* See R 19 (1), Bd. 36, M. Ds. iii. 26.

- 8 Ceannas srut(h) Eireann go holl-glan as oirrdric do Boaind bain:  
ainm do laei don olain eac(h)tnaig dobi ar comaim Neachtain nair.

*Cnogba.* See Bd. 43, M. Ds. iii. 40.

- 9 On cluid<sup>2</sup> cno-coll im tsamain dar imir Englic re n-eg,  
is on guba daer tre dogra dumha caemh Cnogbha na cét.

<sup>1</sup> read ainm.

<sup>2</sup> read cluiche.



*Tailtiu.* See R 99, Ed. 68, M. Ds. iv. 146.

- 10 Deg-ben Eatach inge(n) Magmoir, buime Loga meic Cein cruaid:  
ainm o buimi in fir-feil airgnig dath sír-feim don Tailltin tuaidh.

*Tlachtga.* See R 110, Ed. 73, M. Ds. iv. 186.

- 11 Tlac(h)tga ingean Mog Ruith ramhaig, righ-bean tri mac Shimoin  
sleagh,  
nirbó buaid don baidb a martra: tuaid an ainm Tlac(h)tga na  
treb:

- 12 Doirb is Maeic(h) is Cuma in comlaind comanmann mac  
Tlac(h)tga is tír:  
dia dam sloidhi na siabra gan ní acht moigi diamra dib.

*Cleitech.* See R 114 (3, 4, 5), Bd. 47, M. Ds. iv. 200.

- 13 O cleit(h)i<sup>1</sup> Eirean Cleiteach ag caeinead Cormaic hua Cuind:  
nó o Cleiteach a tig turaid, sin asin Mumain gu muirn:  
nó Cleiteach Muirceartaig Midhe tairbeartaigh gach fini uill.

*Cerna.* See R 115 (1), Bd. 48 (2), M. Ds. iv. 202.

- 14 Cearna ainm sidaigi suaic(h)nid rosuidig in cnoch adcid:  
ainm in deg-fir gusin daig-mein mairidh ar in maig-reidh mín.

*Loch Dá Gabar.* See R 107, M. Ds. iv. 182.

- 15 Searrach Garrc(h)on on glind oirdric, eich Eathach on Mu-  
main móir,  
sgela in trir, gid moch ra mannair, is dib Loch Gabair in  
glóir.

*Dubthir.* See R 84, Bd. 37, M. Ds. iv. 16.

- 16 Dubhthur o diamair in fassaid dofas tre leac(h)t Daire duind,  
gan a laig a n-imdaig uaige nir dligh fingal Guaire in gluind.

*Tráig Tuirbe.* See R 125, Ed. 70, M. Ds. iv. 226.

- 17 Athair Gobhain Tuirni treagmhar, gan gair in<sup>2</sup> geinelaig gan gein,  
bunaidh imgel Traga Tuirn, inber snam(a) suirghi sin.

*Lia Nothain.* See R 87, Bd. 41, M. Ds. iv. 26.

- 18 Nothan cailleach, cian a saegul, siur seantuinde Beirri in buair,  
as uaithi Lia neartach Nothain, slec(h)tach da cot(h)aig a cuain.

<sup>1</sup> *Supply* ach.

<sup>2</sup> *read* gairm.

*Mag Muireisce.* See R 76 (3, 1?), Bd. 44, M. Ds. iii. 426.

- 19 INgean Ugaine moir Muireasc, mag alaind isa hainm air:  
no frith isa Banbha piastaigh tarba gach iascaig 'na fhail.

*Mag Findabrach.* See R 118, M. Ds. iv. 216.

- 20 Findhabair cland Luigdeach Lagdha, bean alta Breagh gusin  
mbrigh:  
atclos uili a mblad go Bearba mag gach duine delbha dib.

*Benn Foibni.* See R 146, Ed. 59, M. Ds. iv. 86.

- 21 Dadrocair Foibhni ger féinidh le Feargna in gaei leathain luain:  
nóco ceil gach dream gan doilghi, ohoin is Beand Foibni fhuair.

*Inber Cichmaine.* See R 104 (1), Ed. 74 (1), M. Ds. iv. 176.

- 22 Cic(h)mhuine citheach in fassaidh a aidid le Feargna fuair:  
rocrean gach sidh-cuiri samna Cichmuine fear calma in cuain.

*Odha.* See R. 103 (2), M. Ds. iv. 174.

- 23 Mat(h)air meic Eiremoin Odhbha, ingen maith Milidh na miadh:  
fa tend 'na tulaigh gan dogra a ceand bunaid Odha fial.

*Mide.* See R 7, Bd. 7, M. Ds. ii. 42.

- 24 Midhi mac Bratha o Brigannsia bladmar ag Toraid a toir:  
do ceis a tairm ar gach fini, conad leis ainm Midhi moir.

*Lusmag.* See R 108, Ed. 71, M. Ds. iv. 182.

- 25 Dian Cecht tug gac(h) lus o Lusmaigh, liaig tuath De Danann  
in tsluaig:  
fo rath na luibhi ra luigeadh a cath Maigi Tuireadh tuaidh.

*Druim Suamaig.* See R 129, Bd. 45, M. Ds. iv. 234.

- 26 Muimne meic Conc(h)obair Cormaic Caeinlech o dan muimne  
mor:  
eolach a tealcaigh in tuagach a seanc(h)aid Suamach na slog.

*Uisnech.* See R 7, Bd. 7, M. Ds. ii. 44.

- 27 'Ouis neach seo' ar ingen glais Gumoir, 'gairit fuind druithe  
dil de':  
roraid Eiriu 'Uisneach adhraidh', conad Uisneach amlaid he.

*Eithne (Carn Furbaide).* See R 88, Bd. 8, M. Ds. iv. 30.

- 28 Eithni ingen Etach Feidlig, fir isna leabraibh 'ga luad,  
bean sin na meit(h)li nach marand roceil Eithni, in aband fuar.

*Tethba.* See R 127, Bd. 13, M. Ds. iv. 230.

- 29 Eochaid Oireamh, ordan Temrach, Teabhtha a hingean, ni  
saeb slicht:

Eiteach roalt in og n-orrdric im coir imm oirbirt in<sup>1</sup> ic(h)t:  
on ingin ata tir Teabhtha ag rimh gach cethra na cirt,  
on buimig dar teann gach tarbha in ceall ag Bladma na  
mblic(h)t.

*Bri Léith.* See R 126, Bd. 9, M. Ds. iv. 228.

- 30 Bri Leith roneacair dias dedla: dibh Liath mac Cealt(ch)air na  
cneadh:  
inge(n) Midhir, Clidna<sup>2</sup> cri<sup>3</sup> na cruad-cnead, deimmin Bri bruath-  
breagh<sup>4</sup> in bean.

*Mag Léna.* See R 112, M. Ds. iv. 192.

- 31 Mac Roaedha rathmair Lena, Lena fuair ainm doin muigh min:  
seis<sup>5</sup> muc meic Da Tho, mar tuigim, creit gan go a tuitim is tir.

*Loch Aindind.* See R 128, Bd. 14, M. Ds. iv. 230.

- 32 Tri locha ag macaibh aird Umoir, Ainnind Fuair as Cimi caech:  
no Ainnind mac Isid nertmair nar deilig re lec(h)taib laech.

*Gáirech.* See R 120, M. Ds. iv. 220.

- 33 Gaireach on gair im Conculaind, dacuirseat oig tre gail gairg:  
rob e in slogh slat-caein a Sleamain na maccaeim a hEmain aird.

*Iarus.* See R 117, M. Ds. iv. 210.

- 34 IR(a)rus ainm arai<sup>6</sup> o enaibh, fir in foras is ni fiar:  
ra clos re gach mbel a mbairdni mo sgel do Cairbri na cñiar.

*Áth Gabla (Áth Grencha).* See R 144, M. Ds. iv. 78.

- 35 Athair aradh Orlam Irard, a eich Cnamradh 7 Cruan:  
uaithibh tre bladh gid cradh cumach mag fan is tulach is tuagh<sup>7</sup>.

*Loch Silend.* Seems different from legend at R 67, M. Ds. iii. 376.

- 36 Robaid a Loch Sighleand seirgni da thoisc a Teamraigh na  
triar:  
da cuairt a Cruachain in comraid da luathaidh in trom-dham  
tiar.

---

<sup>1</sup> read im.      <sup>2</sup> omit.      <sup>3</sup> read clí.      <sup>4</sup> read brúach-brecc  
<sup>5</sup> read leis      <sup>6</sup> read air      <sup>7</sup> read tuath.

*Benn Codail.* See R 109, Ed. 72, M. Ds. iv. 184.

- 37 Codhail cichech oidi d'Oirind Inis Oirind<sup>1</sup> gu teand:  
ga holc ar doman nac(h) damnadh Codal conad bladmar beand?

## PART II

- 38 Mo meanma at tadhall in tuaiscirt ar tur Teabhtha Irbreagha  
in bhuair:  
as gabhtha a tir na ngreas ngribdha ar-rim o Eas righdha Ruaid.

*Ess Ruaid.* See R 81 (2), Bd. 42 (1), M. Ds. iv. 2.

- 39 Tug Ruad ingean Maine mill-sgoth am biadain<sup>2</sup> d'Eas Ruaid  
na ron:  
no saer i a sluag slat a sodaill o Aedh Ruadh mac Moduirnd  
mhoir.

*Loch Erne.* See R 80 (2), Ed. 56 (1), M. Ds. iii. 460.

- 40 Eirni, robaidh usce a hanma a ath(air) Buireadach Bolc:  
inailt hi do Meidb na midlach fa cli dheilbh re hindlach n-Olch:  
a hOlch don cuinis o Cruachain roscuir o thuathaibh na torch.

*Mag nÍtha.* See R 90, Bd. 52, M. Ds. iv. 90.

- 41 O rug mac Breoguind breath Oiligh ainm uadh arin faigthi  
adfrit(h)  
do digail ar Mac Cecht cloidhmech a echt a oirlech a ich,<sup>3</sup>

*Ailech.* See R 91, M. Ds. iv. 92.

- 42 Oileach o Oileach fear Falga, Firgrind laochdha rodasdaer:  
no's is Gorrcend ga mbi oil adhmaid ar a muin gar admai<sup>4</sup>  
Aedh  
no ainm co sl(r)-rathaib sonma o rig-mathair Colla caem.

*Cotre Breccáin.* See R 145, Ed. 58, M. Ds. iv. 80.

- 43 Mac Parthalan buidhnigh Bracan, rosbaidh coiri serb na sín:  
no Maine mac Neill neimnig geill ina geimlibh 'gun gribh.

*Sliab Callann.* See R 101, Ed. 63, M. Ds. iv. 170.

- 44 Callan, con-bhuachaill bo buidhi, bas fuair on Donn Cuailgne  
caem:  
a ainm is buan tiar a dallaind<sup>5</sup>, gunad uadh Sliabh Callaind  
caem.

<sup>1</sup> supply techt 'he possessed'. <sup>2</sup> read a miad-ainm. <sup>3</sup> read fhich.

<sup>4</sup> read cor-adnaic <sup>5</sup> read talland.



*Tuag Inbir.* See R 141 (1), Bd. 46, M. Ds. iv. 58.

- 45 Tuag ingean comramach Conaill, Conall mac Etersgeoil fhuair:  
Fer Hi gu cam is go congaib rosbaid a tir tonnaib tuaidh.

*Sliab Betha.* See R 143, Ed. 57, M. Ds. iv. 76.

- 46 Sliabh Beatha o Bith mac Nae nertmair niamdha con fhir Eriu uar:  
marbh<sup>1</sup> i(n) meitheal min-seang ar teichead dileann na nduadh.

*Ard Fothaid.* See R 89, Ed. 60, M. Ds. iv. 90.

- 47 Ard Fat(h)ad o Fat(h)ad Airgne: aeibind tam in rí<sup>g</sup> go rind,  
darba seol seirci gu soirc(h)i<sup>2</sup> ceol circi Boirc(h)i don Beind.

*Mag Coba.* See R 93, Ed. 62, M. Ds. iv. 122.

- 48 Muinnter d'Eiremhon caem Cobha cudc(h)airi do mill caeb cian;  
oirrdric a blad, cruaidh a comha is uadh Magh Cobha na clíar.

*Ard Macha.* See R 94, Ed. 61, M. Ds. iv. 124.

- 49 Ard Macha do mnai Cruind calma, a comainm don cill o cein:  
nó is o Macha oirrdric Eamna gus in toirbeirt feardha feil:  
Eamain oe<sup>2</sup> dar muing<sup>3</sup> Macha dacuir gleo catha tre ceill.

*Sliab Fuait.* See R 100 (1), Ed. 64 (1, 2), M. Ds. iv. 162, 421.

- 50 Sliab Fuaid o fhot Ír meic Milead romair gu neimead in naeim:  
saeth gan fot faillsi mar suidit ina aimsir suidit saer:  
nó fod Cind Berradhi bladhaig in tsleamairi tsalaig tsaeibh.

*Benn Boirchi.* See R 98, Ed. 69, M. Ds. iv. 144.

- 51 Nocongrad Bairc(h)i buar Uladh, aégairi d'Echtgus<sup>4</sup> gan feall,  
sa dail gurbo heolach aidchi in ceolach Boirc(h)i na mBeand.

*Lia Lingatain.* See R 119, Ed. 65, M. Ds. iv. 218.

- 52 Lia Lingat o Linga labhar ler teangtach<sup>5</sup> frecalla adil fo alla  
na n-eas:  
nó mac do Laegaire Lingid, faelaire is cimid gan ceas,  
ger bho garbh in gach clu á cumaing, romarb Cu Culaind na cleas.

### PART III

- 53 IS leam iar timc(h)eallad Ulad eolas dind Laigen gu leir:  
geibidh mar dlus grind gan glomhair mo rus o Lind Tomair trein.

*Dublind.* See R 26, Bd. 38, M. Ds. iii. 94.

- 54 O Duibh ingean Roduib rachtmair, rig muir Atha Cliath gan ceilg,  
mar grein<sup>6</sup> na tor asin tul-raind rosgon ar in Duiblind deirg.

<sup>1</sup> supply 'sin tsleib (or the like).

<sup>2</sup> read ó eó.

<sup>3</sup> read muin.

<sup>4</sup> MS. dēgus.

<sup>5</sup> Two half-lines seem to be omitted.

<sup>6</sup> read Margin.

*Eo Mugna.* See R 34, Ed. 66, Rev. Celt. xvi. 277, M. Ds. iii. 144, 146.

- 55 *Eo Mugna*, mo na gach mor-chrand rogein a talmain tre tuind:  
dariac(h)t anall ra leas leigind crand adceas a n-Eirind uill.

*Fid Gaible.* See R 11 (1), Bd. 6 (1), M. Ds. ii. 58.

- 56 *Gaible mac Eteman eigis*, uadha ata Fid nGaible ngeir:  
borb roclis in corccra calma robris a<sup>1</sup> drochtgha in Dagda dein.

*Maistiu.* See R 32 (2), M. Ds. iii. 134.

- 57 *Rohainmnigead mag o Maistin* a mor-iath Laigean na learg:  
ingean d' Aengus, glan a gairi, cli roscar in Daire dearg.

*Berba.* See R 13 (1), Bd. 15, M. Ds. ii. 62.

- 58 *Berbha o bruth nat(h)rach neimneach*, snaidm dibh 'ma muinel  
meic Uair:  
Mac Cecht a tulaig na Teamhra rasmudhaig i mBearbha in  
buair.

*Odha.* See R 102, 103, Bd. 51, M. Ds. iv. 174.

- 59 *Rosbaidh in sruthair mear Madha muc<sup>2</sup> cloidmigh moir*:  
rosbaidh aris Odhbha uaimhgeann<sup>3</sup> conartarba in roimgeand  
romhi:<sup>4</sup>  
Odhbha mucaidh Cuind in catha gan druim na flatha re foir.

*Loch Dácaech.* See R 41, Bd. 50, M. Ds. iii. 184.

- 60 *Dacaech ingean Ciguil colaigh*, cland rugad d'Uadu<sup>5</sup> narbh fand.  
Loch Daccaech rosbaid mar bidbaidh in mbain ina himdaigh and.

*Mag Life.* See R 12, Bd. 4, M. Ds. ii. 60.

- 61 *INGean do Cannan caem Liffi le Mag Lifi ruibnibh rod*,  
roslean-si dleachtibhan don<sup>6</sup> daileam, nar meam-crand ag  
aiream og.

*Móin Gat Glais.* See R 14, M. Ds. ii. 64.

- 62 *Glas mac Laine*, luath i geraidh,<sup>7</sup> o gaei neimhneach Moin  
nGai Glais:  
gaet Cul Dubh, rosmear in meartlaig in tšleag dabertaig da  
bois.

<sup>1</sup> omit.      <sup>2</sup> read muccaid Cathair.      <sup>3</sup> read uain-chenn.

<sup>4</sup> read perhaps conár'thorba in ruaim-chenn róim

<sup>5</sup> read d' Fhuata.      <sup>6</sup> read Deltbann in.      <sup>7</sup> read in gérait.

*Belach Gabrdín.* See R 37, M. Ds. iii. 158.

- 63 Gabhran ainm milcon Flainn Failbhi, fichdha roslean Lurghain  
leir:  
cumadh a n-Eamain in abhrain bunadh Bealaigh Gabrain geir.

*Loch Garman.* See R 40, Bd. 5, M. Ds. iii. 168.

- 64 Loch Garman o Garmain oirrdric athair Bomannach na mbeand,  
ge ra gin coll cana Cathaeir glond granna gar tathaeir treall:  
nó Garman mac Deadaid deid-ghil nar deadhail re heigh-  
nibh and:  
nó Garman isa tir taebh-ruaidh dath sin tar in cael-cuan cam:  
nó ba bed bunaid, ge labramh, eg da cumhaidh Ladrاند luam.

*Sliab Mairge.* See R 38, Bd. 39, M. Ds. iii. 162.

- 65 Marg mac Gius(c)a mhoir-meic Lodain, leisiun Sliab suthain  
na séd:  
o 'dclos bas in curaid cicair púdhair don itaid a eg.

*Belach Con Glais.* See R 35, M. Ds. iii. 150.

- 66 Bealach Con Glais meic Duind Deassa, dalta Etirsgeoil gu huain,  
tairbert ara tairm ag Sleamhain, oirrdric ainm in Bealaigh buain.

*Mag Raigne.* See R 43, Bd. 12, M. Ds. iii. 194.

- 67 Da riacht Romhanach dian diachra<sup>1</sup> go Druim na Fidbaidhi fein:  
mairid go buan blad a caingni conad uadh Magh Raigne reidh.

*Lecc Tollchend.* See R 122, M. Ds. iv. 222.

- 68 Laech Tollceand ar traig na tuilibh: Toillceand echt Saxon  
nach suail:  
ceand Toillcind faei dona fairrgibh 'rolaei im cairrgibh in chuain.

#### PART IV

- 69 Seanchas mor-dingnad na Muimneach mithigh iar Laignibh  
na lorg:  
a thosach do Sliabh beacht Bladhma, gorab reidh ceart,  
amra in t-ord.

*Sliab Bladma.* See R 10, Bd. 11, M. Ds. ii. 54.

- 70 Bladma mac Con meic Cais glotaig,<sup>2</sup> a comhainm mair(i)dh  
don ma:  
no's o deag-mac Breogain build remaibh bas uiridh ag snamh.

<sup>1</sup> read díchra.

<sup>2</sup> read chlothaig.

*Stig Mossaid.* See R 148, Bd. 24.

- 71 Seg Mossaid o Mossaid meand, aghar meinic Segh gu suail,  
olch in turchairthi eoin imglain fa deoidh isa midhbaidh<sup>1</sup> fuair.

*Mog Femin.* See R 44, Bd. 16, M. Ds. iii. 198.

- 72 Mairid a muigi gu formhar fed if-Fimhin fhir in oil,  
ar goim prap romaibh da sinead mogaid mac Milead na moir.

*Sliab Cua.* See Bd. 19, M. Ds. iv. 338.

- 73 Sliabh shuthach Cua o Cua ceanmhor, Cua fa mac Buirc  
allaidh uair:  
in<sup>2</sup> sliabh a leacht iar longudh mar arclecht bronnad i(n) buair.

*Port Lairge.* See R 42, Bd. 23, M. Ds. iii. 190.

- 74 Port Largi o laraig Congail, Congal Fomoir, saer in slicht:  
muir-*duchunn*, nach leasg luac(h)ar, dateasg ar muir *uathmar* Icht.

*Carn Ui Néit.* See R 46, M. Ds. iii. 216.

- 75 Mac Ealadhan o Neid nertmhar, niamdha a leacht isa tír teas,  
tug do roda Lug in lamhaigh in cur dogradaig gac(h) greas:  
i carnd fhind na racht is na riaghal marbh a cind seacht  
mbliadhan Breas.

*Tonn Clidna.* See R 45, Bd. 10, M. Ds. iii. 206.

- 76 Da Roth roclaei Clidhna n-imghil, ingean sin Geanaind in gluind:  
Clidhna na ngeal-lam, greid chalma, leandan meic in Daghdha  
duind:  
nó is o Fachtna ag Ros na Rograd<sup>3</sup> daclos a torman on tuind.

*Loch Léin.* See R 55, Bd. 18, M. Ds. iii. 260.

- 77 Lein lin-fiachlach mac Bain Bolcha, bladmar in ceard gusin ceill:  
muinntear Baidhbh ina boithrind mar gach tairm in Lochlaind  
leir.

- 78 Indeoin o Indeoin na nDeisi rindfeoir na nDesi nach seimh:  
dith nemhandach in dind dath-glan, ba buan mar mind  
rathmar reidh.

*Sliab Miss.* See R 51, Bd. 17, M. Ds. iii. 240.

- 79 INgean Mhuireadha Meas fial-nar, ca hadmad caem ar nar' chlis?  
maith in oirbirt riamh in rig-dond on oirrdric Sliab min-gorm Mis:  
noid meisi<sup>3</sup> mhaicni Mileadh gerbh aicmi dimear nar dis.

<sup>1</sup> read fídbaid.

<sup>2</sup> read isin.

<sup>3</sup> read nó it messi.



*Crotta Cliach.* See R 47, M. Ds. iii. 224.

- 80 Cliach cruitirí rocar Banna Bodhbh a athair, in laech liath,  
dobhi go ciamair is nír codail re bliadhain i Crotaih Cliach.

*Carn Feradaig.* See R 56, M. Ds. iii. 266.

- 81 Fear do tsil Erimoin uasail, oirrdric Tigearnach in tairm,  
ro comhaeid ealadhain airligh Fearadhaigh cloidhmigh in cairnn:  
rogábh ag fannaibh in feinnidh do clannaibh Eimhir in airm.

*Luimnech.* See R 57, Bd. 20, M. Ds. iii. 270.

- 82 Robadead luman a Luimneach,—luman ainm do sgiath na  
sgiamh —  
dia robaid Rucht ocus Ruicni dunarcaidh purt tuicthi thíar:  
nó luman da cetaibh Crimthaind medaigh in truím nar fhíar.

*Lige Fintain.* See Ed. 57.

- 83 Ligi Fintain a Tul Tuindi, 'gar cadail mac Boc(h)na buain,  
mairid is tír, ní lia luc(h)air, 'gar sin dia suthain na sluagh.

*Loch Dergderc.* See R 64, M. Ds. iii. 338.

- 84 Loch nDeirgirt roainmnigh o Eochaidh, usce derg ima tuinn  
trein:  
d'Atharni fa dibhadh deibhidh mar bhadh gnimradh enigh feil.

*Sliab Echtga.* Cf. M. Ds. iii. 304 (?).

- 85 Ranic gu hEchtgi caeim Connacht ceim o Mumain mortha  
sluaigh  
fearr di gu solma ra seiseadh na forba deiseal 'nar nduain.

*Sliab Echtga.* See R 60, Bd. 21, M. Ds. iii. 298.

- 86 Inghean Ursgatach aird Eachtghi, ainm na sonaidhi ar in sliab,  
fa bean d'Fergus, saer na sealbha, don deagh-dhos caem  
feardha fíal.

*Mag Aidne.* See R 62, Bd. 22, M. Ds. iii. 330.

- 87 Aidni mogh do macaibh Mileadh, a magh a tír Aidni in aig:  
da beanadh gu buan da bassaibh smual is ainm don lasair lain.

*Ath Cliath Medraige.* See R 61, Bd. 26, M. Ds. iii. 314.

- 88 O cliat(h)aibh sgiath secht mac Meadbha Ath Cliath Meadraigi  
adciat:  
cliat(h)a bo Raghmain ruanaid, nír ealadhan ruabair<sup>1</sup> iat.

<sup>1</sup> read uabair.

*Crechmael.* See R 86, Bd. 40, M. Ds. iv. 22.

- 89 Sampait inghean builid Beathra buailidh Creachmhael in druith  
dían,  
gur fhagsat dan adall imglan abhand is fídbhadh gu fíal.

*Maenmag.* See R 63, Bd. 25, M. Ds. iii. 334.

- 90 Berri(h)oir mac Mílead inaen<sup>1</sup> amhnas, alaind leis Maenmach  
gan maeir:  
buan-ainm ar Bearramhain buidhnigh o ealadhain muirnigh  
Mhaein.

*Findloch Cera.* See R 68, Ed. 67, M. Ds. iii. 378.

- 91 Findloch na finn-ealta tanic a tir tairngiri na naebh:  
aebhdha ceol imgrind na n-eala a find-lind Cheara go caemh.

*Nemthenn.* See R 83, Bd. 35, M. Ds. iv. 14.

- 92 Dreagun ingean Calcmair colaigh rochum in-Neimt(h)ind in  
neimh,  
ar claind Feargusa ba fortail, ger<sup>2</sup> deag-dossa in torcraidh toir.

*Benn Boguine.* See R 142, Ed. 53, M. Ds. iv. 70.

- 93 Gon bheind-sea buaidhreadh bho Flidhais, Fintan<sup>3</sup> rostoir  
taffaind gu tren:  
ag Beind Bogaini na<sup>4</sup> sluag solumh in buar daghonadh go ger.

*Ráth Cruachan.* See R 65, Bd. 27, M. Ds. iii. 348.

- 94 Cruachu cro-derg innailt Edaein, im pogadh Midhir a mían,  
tug ainm do Cruachain in cilairnd, da luathaigh tar Sinainn siar.

*Mag Luirg.* See R 72, Bd. 30, M. Ds. iii. 396.

- 95 Mag Luirg o lor(g)aireacht Conaill: Conall rosiacht Mag seang  
Slec(h)t:  
Ruad-choin da guin Conaill Cearnaig, fa dodaing d'fearnaibh  
in t-ec(h)t.

*Cnoc Tarbga.* See Bd. 28 (cf. M. Ds. iii. 370, R 66).

- 96 Darat ainm oirrdric do Tharbhgha troid Fhindbeandaigh ding  
sa Duind:  
rugadh an beim, ger bha badhbha, sa reimh a cnuc Tarbgha  
truim.

<sup>1</sup> read Maen.

<sup>2</sup> MS g̃.

<sup>3</sup> read Fiach.

<sup>4</sup> omit.

*Loch Néill.* See R 73, Bd. 29, M. Ds. iii. 404.

- 97 Niall frithir mac Enda Aignig, a oidhid ag Loch nar Neill:  
dibeargach in flaith re forland da chaith gach comhlaid gu ceill.

*Mag Aí.* See R 73, Bd. 29, M. Ds. iii. 404.

- 98 IN Niall sin is a chu comcruaid, rascuir in loch finn-glan faei:  
niairidh<sup>1</sup> gu buan bladh a tharaill, conadh uadh Mag n-alaind  
nAei.

*Loch Ri.* See R 79, Ed. 55, M. Ds. iii. 450.

- 99 Ri mac Muireadha feil arm-ruaid, uadh Loch Ri rambach  
na cead:  
aenach du gach laeidnig<sup>2</sup> leabair, fa haeibind sleaman in sed.

*Sinann.* See R 59, Bd. 33, M. Ds. iii. 286 : also R. 139,  
M. Ds. iv. 36.

- 100 Sinand, gein Lotin tailc treabair, a tir tairngiri dachuaidh:  
ag snam dabaideadh in barr-caein ler traid an Tarrchaein  
tuaidh.

nó i<sup>3</sup> clann maith Mongain, nar mearrdha, a Rind Fhallain  
ferdha fhuair

rochar mac Cumhail a hAlmain, slat gach fulaing adbail fhuair:  
nó Sinand sin gach rí romaind daceil si<sup>4</sup> Moraind on Muaigh.

*Lecht (?) Medba.*

- 101 Oididh Meadbha do claind Eathach a n-inis, ger chalma in  
crecht;

Furbaidhi dabuail 'na bathis innuair narb athis in t-echt.

*Móin Tire Náir.* See R 105, M. Ds. iv. 178.

- 102 Nar, bha laech-nia mac fial Fintain, Fintan mac Conaill, ni  
ceil<sup>5</sup>:

on arthfhin<sup>6</sup> sin moin na mothar le rim sloigh soc(h)ar na sen,  
or is olc adhbhal le ar n-eigsibh a marbadh d'eigsibh na n-en:  
is o enaibh Snam na Sindha da sgelaib dal ngilla ngeir.

*Cloenloch.* See R 116, Bd. 49, M. Ds. iv. 210.

- 103 Claen mac Ingair, eigis Alban, uad Claenloch sa Breiffni  
buain:

dearbh go tug curadh na caemh-roth bunadh do Claenloch  
na cuan.

<sup>1</sup> read mairid.

<sup>2</sup> read laiding.

<sup>3</sup> read is.

<sup>4</sup> read sin.

<sup>5</sup> read céil.

<sup>6</sup> read art finn (?).

*Findloch.* Cf. st. 96.

- 104 Findloch o Finnbeannach alaind, oirdric in monar nar min:  
maíidh a dluig is a deag-Dond, dacuir le termonn na thír.

*Loch Dechet.* See R 75, Bd. 31, M. Ds. iii. 410.

- 105 Dec(h)et in rath-moghaidh rabach da rith o Muigh Lughna lan:  
in loch dabhaidh in mal muirneach diarbo dan suirgech in  
snamh.

*Loch Con.* See R 74, Bd. 32, M. Ds. iii. 408.

- 106 Milhu Manandan in mara, alaind Mog na n-indsi anall:  
Loch Con ras huir 'na craidhí cuichí a ndiaid na muicci  
nar mall.

*Ceis Corann.* See R 77, Ed. 54, M. Ds. iii. 438.

- 107 Decheti<sup>1</sup> cruitirí a Corand ceis ag ingin Eac(h)ach feil,  
is uaithi in magh im Ceis Coraind a bladh roa aind ina reim.

*Druim Cliab.* See R 82, Bd. 34, M. Ds. iv. 8.

- 108 Druim Cliabh curaidh cobhlaigh Curnain: Curnan rosmill  
Dun mBolg mar:  
mor in gnim, airim re asgnam, an li(n) da trasgradh gan tar.

- 109 IS mithigh anes o eigsibh: a meic, sguir d'adhmhad tre aeibh:  
is meisdi go meinic meabair mad eimilt leabair in laeidh.

- 110 Eolus dingnadh aras dheigfhear, nocon e-seo seanc(h)as suail:  
Finntan do Druim Caein, nach meablach, docum do taebh  
Teamrach tuaid.

- 111 Nir cuireadh a n-aenn-dhuan reime a nEirinn dingna na ndam  
go bas Toirdealbhaig na trom-torch sond-meabraith na long-  
port lan.

- 112 Saeth leam nach beith beo da bunadh: da bas budh caein-  
teach in caei:  
o dia da fhuair arís rig-bladh dachúaidh a mis min-glan  
Mhaei.

- 113 Tricha mac Ruaidrí na ríghí, reimis Toirdealbach fa tren:  
robo cenn buan ar in mBhanbha a sluag cum fagla nir er.

<sup>1</sup> read Coro.



- 114 Sesca tri cet is coic mili maridh gar dealbhas mo dhuain  
do bliadhnaibh sin ar na samhadh, o dagein Adhamh co  
n-uaill.
- 115 Da fiarfaigthea in aeis grind gleordha o ragenair Crist gan  
clodh,  
sesca ar cet sé bliadhna brígi do reir riagla is mili mor.
- 116 Oñ Enair cuigidh i callaind comhdig biseax legthar libh  
deadhail re gach saithi sobhrach laithi sa domnach go dil.
- 117 On cuiri fhuaras na forbha na firindhi leaba lan  
mairidh in ceathrur 'gar cuireas cleath-chor sa nddibheas re dan.
- 118 Creidim a n-aenta na naeingrad<sup>1</sup> aenn dia foraisgana<sup>2</sup> a fiach,  
(nochon e ar nduileam is deini) ler tuireadh Eri na n-iath.
- 119 Fichi is cét gu ceart do rannaibh uimir da luaidheas im laeidh  
uimhir na n-illda gan uamhain as Birrdha nua-gil in naeimh.
- 120 Buidhean na ndingnadh da dibadh, drong ramhor daclas  
o cein,  
ge taid re sgelaibh ag sgarthain meraidh is mearfaigh a  
mein:  
gach neach 'na dorrtigh truaigh talman is uaill<sup>3</sup> re n-adnadh  
con-eir. *Eiri.*
- 121 Gilla na Naemh na ndhuan niamhdha O Duind fer sgailti na sgel  
darighni duain fhir-glaein amra do righraidh Banbha na fhēr  
a n-Inis Clochrand na cuiri tar nach loch-mall tuili tren  
ni lag gan tathaeir dia tapadh cathaeir na n-abbadh is na n-eir.  
Eiri iarthar talman toir *et cetera.*

<sup>1</sup> *read* na noi ngrád (?).<sup>2</sup> *read* forascann.<sup>3</sup> *read* suail.

## NOTES

st. 9. The ds. of Cnogba (prose and verse) is found in four mss. of the R-recension (Y H SS<sub>3</sub>). The prose only is found in Bd, and in the M-interpolation (*supra* p. 69).

st. 24 and 27. The legends to which these two stanzas refer are combined in Ds. of Mide as we have it in all recensions.

st. 32. Cimme and his lake are mentioned in Bd, but not in the R-family, prose or verse.

st. 36. Whatever this stanza may mean, it does not seem to have anything to do with the Ds. of Turloch Sílinde (R 67), or of Loch Cenn, also called Loch Silenn (R 151: cf. M. Ds. iv. 258).

st. 39. All copies of the Ds. call Aed son of Badurn: the form *Moduirn* is however confirmed by the alliteration with *móir*. It may be borrowed from the river Modarn or Modorn, now the Mourne, in Co. Donegal. In Acallam na Senórach also Aed is called *mac Moduirn*.

st. 50. The legend of Cend Berraide is in Ed. 64, but not in the R-family, with the exception of HS: see M. Ds. iv. 421.

st. 52. The rare word *faelaire* seems to be taken from the stanza annexed to the prose Ds. in LL 165<sup>b</sup> 37 (*ba faelaire frithir-gó*). This stanza is not in Ed. 65.

st. 58. In this form of the legend the snakes seem to be coiled round MacUair's throat, instead of hidden in Mechi's three hearts.

st. 59. This stanza combines the legends of Odba and Sruthar Matha as in Bd. 51. They are separated in R 102 and 103, as also in LL 169<sup>a</sup>, 170<sup>b</sup>.

st. 64. The last line refers to the death of Labraid *luam*, mentioned in Lebor Gabála (LL 4<sup>b</sup> 36) and in Ed. 57 (Sliab Betha), but nowhere else in the Ds. Note that this line does not rhyme with the preceding.

st. 71. Séig Mossad is included in some members of the R-family (Lc 523<sup>b</sup>), not in RB.

st. 73. Sliab Cua is in LL and Bd., but not in any of the R-family.

st. 74. In all recensions of the Dindshenchas the mermaid's victim is called Rot.

st. 76. The third line does not correspond to anything in the Ds. versions.

st. 77, 78. These stanzas both relate to the legend of Loch Léin.

st. 79. The third line refers to the second legend in R 51; it is not in LL or Bd.

st. 80. In R 47 and LL 169, the lady's name is Conchenn, with Báne as an alternative.

st. 82. The names Rucht and Ruicne are not used in the Dindshenchas: they are taken from the tale *Cophur in dá Muccido*: see *Irische Texte* iii. 245, 69. The alternative legend in line 3 refers to Ds. of Luibnech, which is evidently confused with Luimnech; see R 121, and read here *nó luban di chétaig Crimthaind*. In the last half-line Bergin suggests *in etaig imthruim*.

st. 83. The Ds. of Luimnech mentions Tul Tuinne, but not Fintan's grave thereon. This is referred to in the Ds. of Sliab Betha in Ed. 57, not however in the R-version (no. 143).

st. 84. In the Dindsenchas Fercertne is substituted for Athairne: see however the story in LL 114<sup>b</sup> 1.

st. 85. This stanza does not seem to have anything to do with the prose Ds. of Sliab Echtga. It may possibly refer to the poem printed in *Met. Ds.* iii. 304 (Echtga II).

st. 93. For *Fintan* LL 165 and Ed. 53 have *Findchad*: the R-texts have Fiachu and Fiach.

st. 96. The substance of this stanza and of st. 104 is contained in Bd. 28 and LL 166<sup>b</sup> (see Rev. Celt. xvi. 272). The legend of Tarbga, but not that of Findloch, is referred to in R 66 (Ath Luain).

st. 97. 98. These two stanzas relate to the legend of Loch Néill as told in R 73 and Bd. 29. A different account of the name Mag Ái is given in R 69.

st. 100. The first legend here is that of Sinann as in R 59, Bd. 33: the second is part of the Ds. of Ath Liac Find as told in R 139. With line 5 cf. M. Ds. iii. 296, 58.

st. 101. The story of Medb's death is not found in any recension of the Dindshenchas, though there is a poem on Fert Medba in LL: see M. Ds. iv 366. O'Duinn's stanza follows *Aided Medba* (see LL 124<sup>b</sup> 34; Edinb. MS. XL. tr. Meyer, Celt. Mag. xii. 211; cf. Thurneysen, *Irische Helden- u. Königsage* 583 ff.).

st. 103. In the Dindshenchas Cloen mac Ingair is a merchant, not a poet.

st. 107. The harper's name is *Coro* or *Corann* in the Dindshenchas: *Decheti* must be a blunder of the scribe.

E. J. GWYNN.

## SÉN DOLLOTAR ULÁID.

THE poem here edited is written on the lower margins of columns 305—314 of the Yellow Book of Lecan. Owing to its position it has suffered much from the fingers of readers, and many words are now barely legible. I think however that I have succeeded, after repeated attempts, in recovering the text almost entire. No trace of the poem is visible in the Facsimile (pp. 311 *seq.*). The page of the MS. on which the poem begins is occupied by the latter part of *Cath Maige Ratha*.

I know of no other complete copy of the poem; but in the lower margin of Laud 610, fol. 114 *verso* the first two stanzas are written in a peculiar violet ink<sup>1</sup>, preceded by the following introductory note: *Cathfad drui ise rocan in laid-sea sis for cath Finncorad timcill in catha imacuaire 7 cach timcell catha imangabar arternoid asingabad sin.*

The same note is prefixed to the poem in YBL, but there the obscure words following *imangab* are almost entirely illegible: I read very doubtfully *ar der . . . lai . . . asrghabad* (or *arrghabad*) *sin*. In the two stanzas given, Laud 610 agrees with YBL except for having *co hach-* for *co hechaid* in st. 1, and omitting *cend* before *Bruige* and writing *dúgail* for *Dungail*.

The note can only refer to that battle of Findchora whose story the author of *Cath Ruis na Ríg* left untold. Thurneysen argues in his *Heldensage*, p. 364, that there never was such a battle, and that the references to it which he has collected are based on the note at the end of *Cath Ruis na Ríg*<sup>2</sup>. However that may be, it is obviously a gross anachronism to ascribe our poem to Cathbad, seeing that some of the events which it enumerates must belong to much later times than his. The persons named in

<sup>1</sup> Notes in this same ink occur all through the MS.

<sup>2</sup> Another reference occurs in the dindshenchas of Ath Crocha (*Metr. Dindsh. iv. 276*).



distich 2 are indeed mentioned in CRR § 7: only that Bruide is there Artúir's father, not his son. They must belong to the line of the Irish Kings of Dál Riada in Scotland: as to the name Artúir, see Meyer's *Wortkunde* § 40. Distich 5 probably refers to the Battle of Ross na Ríg, and the battle mentioned in 1 is of course the fight between Eochaid Feidlech and his sons, graphically described in the dindshenchas of Druimm Criaich (Metr. Dindsh. iv. 42). Of the other events referred to I know nothing.

YBL col. 305—14 (Facs. p. 311—15)

- 1 Sen dollotar Ulaíd hi cath Droma Criaig:  
tucsat cend a maccu leo co hEchaid ar gli(ai)d<sup>1</sup>.
- 2 Sen dollotar Ulaíd isin Albain ndurmair,  
co tucsat cend mBruige leo is Artuir meic Dungail.
- 3 Sen dollotar Ulaíd i Lachlainn co leri,  
co tucsat nóí catha on comainm coa celi.
- 4 Sen dollotar Ulaíd i cath srib-glan Sachsan:  
robo mer<sup>2</sup> in meisnech robo crodha in gasrad.
- 5 Sen dollotar Ulaíd i Traig Roiss co n-aíne:  
cindsitar na caemi brisitar na baige.
- 6 Sen dollotar Ulaíd i reim, n-ágda fechtas<sup>3</sup>,  
dia rotoíglad Torach triun<sup>4</sup> fer Falga.
- 7 (Sé)nsom rig in choicid cur comalla a calmdhacht,  
cor thubath<sup>5</sup> cor tairned<sup>6</sup> na tuatha fria tangnacht.
- 8 Sensom óg a n-amus cor horbat<sup>7</sup> enech;  
Sensom og a mbrugad<sup>8</sup> co . . . brugad enech.
- 9 Ar milid, ar macrad, co rachobra in cel-sa,  
ar treoin is ar toisig co rachobra in sen-sa.

*Sen dollotar Ulaíd.*

<sup>1</sup> *Read* tucsat leo co hEchaid cendu a macc iar ngliaid.

<sup>2</sup> *May be* mor.

<sup>3</sup> *Read* fechtas n-ágda.

<sup>4</sup> *Read* for triun.

<sup>5</sup> *Read* thuba, or *perhaps* thubtha.

<sup>6</sup> *Read* thairni.

<sup>7</sup> *Read* co rofhorbat.

<sup>8</sup> *Read* mbrugad.

## TRANSLATION

1 Luckily came the Ulaid to the battle of Drumcree: they brought Eochaid his sons' heads after the fight.

2 Luckily came the Ulaid to rugged Alba, and carried off the head of Bruide and of Arthur son of Dungal.

3 Luckily came the Ulaid to Norway, expeditiously, and fought nine battles, from year's end to year's end.

4 Luckily came the Ulaid to bright-flowing battle with the Saxon; rash was their daring, valiant their chivalry.

5 Luckily came the Ulaid to Traig Roiss in glory; they arrayed their nobles, they broke the foeman's boasting.

6 Luckily came the Ulstermen on a raid, a warlike venture, when Tory was sacked against a third of the men of Falga.

7 We blessed the King of the province, that his valour may have full scope; that he may attack and beat down the peoples in their treachery.

8 We blessed their troops, one and all, that they may complete honour; we blessed their hospitallers, one and all, that they may increase hospitality.

9 Our soldiers, our striplings — may this omen aid them! Our champions, our chieftains — may this blessing aid them!

## NOTES

1. *Sén dollotar* is a shortened form of the phrase which we have in the negative *nírbó sén maith dolodbair*, Ir. Texte II. 2, 214 § 6. Cp. Dinneen '*séan*, a magical source of protection in battle, a charm,' *seun catha*, Oss. Soc. III. 204, 2; Cath Muighe Ratha, ed. O'Donovan, 74 n; *níp sēn*, Táin (ed. Str.-O'K.) 3658; *rop sēn*, Metr. Ds. IV. 68, 157; *rob sén Breisse*, Cormac s. v. *riss* (*sic leg.*).

3. *ón chomainm coa chéli* 'from one day to its anniversary.' Cp. *a comainm in lae célna*, quoted in Contribb. from Rev. Celt. VI. 175, 57.

7. For *thubat* I would read *thuba* (pres. subj.) corresponding to *tuba* 'attack;' see Laws Glossary; or possibly *thubtha*, from *\*doboithaim* 'frighten,' as *fubtha* from *fobothaim*.

8. The repetition of *enech* is somewhat suspicious; if it is sound, the same word is used in two different senses. Alliteration of the type *uaimm gnúise* is more usual in the first half of a distich of a quatrain than in the second, so that we ought perhaps to invert the order of these two lines: we should then obtain a regular series in the order *amus*, *mlíid*, *macrad*, etc.

9. Here again the repetition of *rachobra* seems wrong especially as there is no alliteration in the final half-line.

E. J. GWYNN.

## THE HISTORY OF THE STOWE MISSAL<sup>1</sup>

AS Sir George F. Warner has shown (Henry Bradshaw Society, vol. xxxii, pp. xxiii sq.), there is good reason to believe that the major portion of the Stowe Missal—or the Lorrha Missal, as it might more fittingly be called—was written in the monastery of Tallaght, co. Dublin, not long after the death of St. Mael-ruain<sup>2</sup> in 792, and quite possibly before the year 812, when Mael-ruain's successor, Eochaid, died.

Inscriptions on the *cumhdach* or casket which was afterwards made to contain it, enable us to infer something of the later history of the Missal. One of the inscriptions on the older face of the *cumhdach* asks a prayer for *Donchad macc Briain* [Bóroimhe], who is here called 'King of Ireland' (*ri Herend*), though the Annalists confer no higher title on him than that of *airdrí Muman*.<sup>3</sup> Another inscription on the same face asks a prayer *do Macc Raith hu Donchada do rig Cassil*. As this inscription will, I think, enable us to fix the date of the *cumhdach* within narrower limits than has hitherto been thought possible, it may be well to summarize here what we know of this Macraith ua Donnchadha from the various Annals.

His name implies that he was grandson of Donnchadh, evidently the Donnchadh (son of Ceallachán), King of Cashel, who died in 963. His contemporary and rival, Carthach (whose name

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<sup>1</sup> Read before the Royal Irish Academy, Jan. 26<sup>th</sup>, 1925.

<sup>2</sup> The saint's name occurs as *Maile Ruen* on fo. 33a of the Missal. The suggestion quoted by Warner (p. xxx) that Ruen here "is phonetic writing for Ruadāin" is impossible, not merely for Old Irish but for any period of the language.

<sup>3</sup> In the Annals of Innisfallen (ed. O'Connor), which are the only Munster annals we possess, I have not noticed any title assigned to Donnchadh. Even Keating does not venture to speak of him as more than 'King of *Leath Mogha* and of the greater part of Ireland' (For. Feasa, iii, p. 290). Donnchadh ruled from about 1023 to 1064, when he was deposed and went on a pilgrimage to Rome, where he died.

is perpetuated in the surname Mac Carthaigh), was grandson of the same Donnchadh.<sup>1</sup> We first hear of Macraith in 1027, when he aided the Ossorians to repel an invasion of their territory by Donnchadh mac Briain and his allies.<sup>2</sup> Among the lords on Donnchadh's side who fell in this expedition were Conall mac Éigeartaigh, King of Eóghanacht (or of Northern Eóghanacht), and his brother.<sup>3</sup> The death of this Conall in all probability made the way clear for Macraith to attain the kingship of Eóghanacht, *i. e.* of a district in the northern portion of the present Co. Tipperary.<sup>4</sup> In 1040 a cryptic annalistic entry refers to Macraith being put in fetters.<sup>5</sup> Two years later the King of Leinster, Murchadh mac Dúnlain, was slain by Giollapádraig, King of Ossory, and Macraith, now King of Eóghanacht, in a battle at Magh Muilched in Laoighis.<sup>6</sup> Next year (1043) the forces of Ossory, joined by the men of Ormond,<sup>7</sup> the latter under Macraith ua Dondchada<sup>8</sup> and the King of Ara (Ua Donnacán), marched south into the territory of Carthach,

<sup>1</sup> Todd (On an Ancient Irish Missal, Trans. R. I. A., xxiii, 9) took it for granted that Macraith and Carthach were brothers; but this is not all certain. Carthach is given in the annals and pedigrees as son of Saoirbhreathach (who was son of Donnchadh), but we have no evidence as to the name of Macraith's father.

<sup>2</sup> AI (= Annals of Innistallen, ed. O'Connor), *s. a.* 1010; Leabhar Oiris (Ériu, i, 104). The other Annals do not mention the part played by Macraith in Donnchadh's defeat. Macraith appears at this time to have been in the service of the King of Ossory (*ro bui ar cocud in Osraige*, AI).

<sup>3</sup> *dá mac Ecertaigh 7 righdamna Eoganachta*, Tig. (RC. xvii, 367), where *rí* appears to have dropped out before 7; *dá mhac Ecceartaigh tigherna 7 tanaisi Eocchanachta*, FM; *dá mac Egertaigh, Rí ocus rigdamna tuaisgeirt Eoganachda*, Chron. Scot. (*s. a.* 1025); "the 2 sons of Egertagh prince and king of the North of Eognaght of Cashell", A. Cl. AI mention only *Conall m. Escertaigh rigdomna Cassil*; while the Leabhar Oiris alludes to three brothers, *Conall mac Éigeartaigh go n-a dhís bhráthair*. AU and A. Loch Cé make no allusion to any of them.

<sup>4</sup> Cf. *Eóganacht Ruis-airgid* and *Eóganacht Criche Cathbhuidh* in Hogan's Onomasticon. The *Rí Eóganachta* at this period was king of this restricted territory, and was merely a *rigdomna* of Cashell. The king of Cashell was called either *Rí Cassil* or *Rí Eóganachta Cassil*.

<sup>5</sup> *Macraith hua Donnchada do chumrech*, AI (*s. a.* 1023). Not in the other Annals.

<sup>6</sup> Tig., AU (which by a slip calls him Macraith mac Donnchada), ALCé, Chron. Scot. The FM, who give *rí* a much more restricted sense than the older annalists, alter Macraith's title to *tigherna Eoganachta*.

<sup>7</sup> *Ermuma*, AU, ALCé; *airther Muman*, Tig.

<sup>8</sup> Tig. (and FM).



King of Cashel, and as far as *Dín-na-sciath* (Donaskeagh), which they burned; but Carthach met and defeated them, and Ua Donnacán was slain. Thus failed what was doubtless an attempt by Macraith, aidedly his ally of Ossory, to secure the kingship of Cashel. Two years later, in 1045, we find recorded the death of Carthach, *rí Eóganachta Caisil*.<sup>1</sup> After Carthach's death Macraith appears to have succeeded him without opposition, for in their only subsequent reference to Macraith, viz. in recording his death in 1052, the annalists for the first time give him the title of *rí Eóganachta Caisil*,<sup>2</sup> or *rí Caisil*.<sup>3</sup> Accordingly, as the inscription on the casket of the Missal gives Macraith the title of *rí Cassil*, we are justified in concluding that its date cannot have been earlier than 1045, nor, of course, later than 1052.

The inscriptions on the later face of the casket show that this part of the decoration was carried out at the instance of Pilib Ó Ceinnéidigh,<sup>4</sup> King of Ormond (who died in 1381), and of the coarb (*comarba*) Gillariuadān Ó Macān. When these inscriptions were made, the Missal was evidently in Ormond (*Urmuma*), which in its later and restricted sense meant only the northern part of the present Co. Tipperary. The "coarb" can only mean the coarb of St. Ruadhán, founder of Lorrha, which in the fourteenth century was the only abbey in Ormond that could claim a continuous existence from pre-Norman times. (The coarb's christian-name, *Gilla Ruadháin*, is also significant in this connection). Hence we may take it as certain that in the late fourteenth century the Missal was in the custody of the abbey of Lorrha. And as treasures such as this were as a rule preserved in the same monasteries all through the centuries down to their suppression by the English power in the sixteenth century, it would be a reasonable inference,

<sup>1</sup> AI, AU, ALCé, Tig. (this last with *-acht* for *-achta*). The FM, as usual, change *rí* to *tigherna*. As his death was brought about by Ua Longarcáin, of the Dál gCais, it is very likely that the men of Thomond at this time favoured Carthach's rival, Macraith.

<sup>2</sup> AU, ALCé. Tig. adds to this *rigdamna Muman*. The FM follow Tig., while substituting *tigherna* for his *rí*.

<sup>3</sup> *rí Cassil*, AI. Macraith's successor (his son, according to FM), Dunghal († 1057), is similarly called *rí Cassil* in AI, and *rí Eóganachta Caisil* by the other annalists.

<sup>4</sup> The beginning of this surname (viz. *Hu Cein* . . .) is also found on a mutilated inscription on the same face. This may be worth mentioning because Warner (p. lvii) erroneously takes it to represent the name Ó Céin.

in the absence of evidence to the contrary, that the Missal also belonged to the monastery of Lorrha when the *cumhdach* was first made for it in the eleventh century. Quite apart from this fourteenth-century evidence, the character of the earlier inscriptions makes it clear that the Missal was in Munster *ca.* 1050, that is to say, some two and a half centuries after it was written in Tallaght; and the fact that one of these inscriptions acknowledges Donnchadh as King of Ireland would make it likely that they were written in some such district as Lower Ormond, where Thomond influence was sure to be strong.

How, then, did the Missal come from Tallaght to Munster? The only suggestion Sir George Warner has to offer is that "it may have been carried of in 1026, when it is recorded in the Annals of Tighernach and of Ulster that Donchadh mac Briain invaded Leinster among other parts and exacted pledges or hostages" (p. xlix). Many objections might be urged against this suggestion, which I regard as quite untenable. To begin with, the Annals speak of Donnchadh exacting not "pledges or hostages" but only "hostages" (*giallu*). Moreover I know of no instance in Irish history of pledges or hostages being taken from monasteries, which normally were exempt from the penalties, as well as from the duties, of warfare. Nor would a simple MS., unenclosed in casket or shrine, offer any temptation to the cupidity of a military leader. It is true that MSS. written in Irish and preserved in lay custody are known, in later times, to have been bought from their owners, or given by them in ransom, or even re-taken by force from their new owners; but that is quite another thing, for the Missal is a purely ecclesiastical MS., and is practically altogether written in Latin. Again, if Donnchadh had forcibly taken the Missal from the monastery of Tallaght in 1026, we should expect not only to find record of the fact in the Annals<sup>1</sup> but also to find the annalists establishing, *more suo*, a connection between the profanation of the monastery and the notable defeat inflicted on Donnchadh by the Ossorians in the following year.<sup>2</sup> Further-

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<sup>1</sup> It is worth noting that, as the annalists record, the community of Tallaght in 811 put a stop to the assembly of Tailtiu as a punishment for the violation of their *termann* by the Uí Néill.

<sup>2</sup> See, e. g., the instances of vengeance following profanation recorded by the FM *s. aa.* 1026, 1043, 1044.

more if the Missal had been in Donnchadh's possession, we can hardly avoid the strange conclusion that he chose to bestow it on a monastery in Ormond, outside his own territory, instead of on the monastery of Killaloe, near his residence of Kincora. Finally we must note the discrepancy between the date (1026) when Donnchadh is supposed to have acquired the Missal and the date, one of the years 1045-1052, when, as we have seen the *cumhdach* was made.

There is, indeed, not a particle of evidence to support the contention that the Tallaght community had the Missal in their possession for 200 years or more, and that, when they parted with it, they did so under compulsion. I suggest that in reality neither of these things happened, and that the Missal was brought away from Tallaght shortly after being written there, and brought away, in all probability, by its owner, that is to say, by the monk that wrote it. What links were there between Tallaght and Ormond? One thinks, first of all of Mael-díthruib, "the anchorite of Terryglass" (*Tír-dhá-ghlus*), on the shore of Lough Derg, who was a member of the Tallaght community during the lifetime of St. Mael-ruain, and whose death is recorded by the Four Masters at the year 840. His veneration for Mael-ruain is manifest in the tract on Mael-ruain's teaching which has been edited by Messrs. Gwynn and Purton.<sup>1</sup> It seems certain that, some time after Mael-ruain's death, Mael-díthruib left Tallaght and retired (perhaps returned) to the monastery of Terryglass, where he died. And, secondly, one thinks of the anonymous author of the tract in question, who also spent some time in Tallaght while Mael-díthruib was there, and who appears to have similarly retired afterwards to Terryglass or its neighbourhood.<sup>2</sup> So far as we know, only these two, Mael-díthruib and the author of the tract, were associated both with

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<sup>1</sup> "The Monastery of Tallaght", *Proc. R. I. A.*, xxix, C, 115sq.

<sup>2</sup> The main part of the tract was written during the lifetime of Mael-díthruib, but a paragraph towards the end appears to have been added after his death (Gwynn and Purton, *op. cit.*, p. 121). If the gloss *i. elair* in § 5 is correct, it would point to the tract having been begun not later than 807; but possibly Mael-díthruib, and not Elarius, is the person to whom the text refers. It is worth noting that the MS. into which this tract was transcribed (quite possibly from the original MS.), apparently in North Tipperary, *ca.* 1499, was in the seventeenth and eighteenth centuries preserved in Lower Ormond, in the very district associated with the Stowe Missal.

Lower Ormond and with the Tallaght of Mael-ruain's time.<sup>1</sup> Now the monastery of Terryglass (which had been founded by Colum moccu Cremthainn, † 549) fell into decay, like some other monasteries, during the period immediately preceding the Norman invasion. The last we hear of it is in 1164, when the Four Masters record (not for the first time) that it was burned. Some time afterwards its jurisdiction was taken over by the neighbouring monastery of Lorrha,<sup>2</sup> which had in the meantime adopted, like so many other Irish monasteries of pre-Norman foundation, the rule of the Regular Canons of St. Augustine. Thus if, as I contend, our Missal was brought from Tallaght to Terryglass in the first half of the ninth century, it must have been in Terryglass when it first got its *cumhdach*, ca. 1050. Later on, when Terryglass was incorporated in Lorrha, the Missal would in the ordinary course have been transferred to the latter monastery, where we actually find it in the fourteenth century.

Before passing on to consider the later history of the Missal, it may not be amiss briefly to discuss another of the inscriptions on the older face of the *cumhdach*, viz. the inscription which asks a prayer for the person who wrought it, Dunchad hua Taccain,<sup>3</sup> of the community of Cluain (*do muintir Cluana*). The gen. *Cluana* here is obviously an abbreviated form; the engraver had not sufficient space to write the name in full. Warner,<sup>4</sup> following Reeves, has no doubt that Clonmacnois is meant; but I think that this identification is far from certain. While it is true that Clonmacnois was the best-known and most important of the monasteries whose names began with *Cluain*, it is at least arguable that *Cluana* here may represent Clonfert (*Cluain Ferta Brénaim*), or Clonenagh (*Cluain Eidnech*), or Clonfertmulloe (*Cluain Ferta Molua*). In favour of

<sup>1</sup> Next to these we should place Dimmán Arad († 811), a member of Mael-ruain's community (LL. 370c), who, as his name shows, was connected with the adjacent district of Ara.

<sup>2</sup> Cf. J. Gleeson, *Hist. of the Ely O'Carroll Territory*, p. 255.

<sup>3</sup> The only occurrence of this name in the Annals is at the year 1022, when the death of Flann hua Tacain, airchinnech of Durrow, is recorded (AU, etc.). In connection with Clonmacnois one meets the name Ua Tadhgáin (FM s. aa. 996, 1168; cf. also Macalister, *Memorial Slabs of Clonmacnois*, pp. 98–99); but the two names are apparently quite distinct.

<sup>4</sup> P. xlvii. Cf. also his remark, p. xlix: "The Cumdach is less likely to have come from there [viz. Lorrha] than from Clonmacnois, of which house Dunchad O'Tagan, who wrought it, calls himself a member."



Clonfert is the fact that geographically it is the nearest of the four monasteries to Terryglass, with which it is known to have had close relations in the ninth century,<sup>1</sup> and possibly later. With Clonenagh the relations of Terryglass appear to have been closer still. Fintan († 603), the founder of Clonenagh, was a disciple of Colum († 549), the founder of Terryglass. Aedh mac Duib-dá-crích, murdered by the Norsemen in 845, was abbot both of Terryglass and of Clonenagh; and Mael-ciaraín, † 903, held a similar joint abbacy.<sup>2</sup> As regards Clonfertmulloe, now known as Kyle (in Queen's Co., near Roscrea), it may be worth remarking that it is the only one of the four places which is in the same diocese as Terryglass to-day, and the same was probably the case in the eleventh century.<sup>3</sup>

The monastery of Lorrha was suppressed about the middle of the sixteenth century. In 1552 the English Government gave a lease for 21 years to "John O'Hogan, clerk, late prior of Larrowe in Ormond," of the site and demesne lands of "the priory of Canons of S. Augustin of Larrowe," and also of "the monastery of friars of S. Dominick's order" in the same place.<sup>4</sup> How far the suppression was effective at any time during the next half-century probably depended to some extent on the varying pressure of English power. In 1578 "John Hogane, gent.," was granted a lease for 21 years of the same two monasteries (Fiants Eliz., 3207). Having become forfeited to the Crown owing to non-payment of

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<sup>1</sup> Thus Cormac mac Ceithernaigh, † 885, was vice-abbot (otherwise prior) of Terryglass and Clonfert (AU, FM); and Mael-petair, bishop, abbot of Terryglass, † 895, is described (FM) as coarb of Brénainn.

<sup>2</sup> Oengus, after completing in Tallaght the celebrated *Féilire* which bears his name, returned, as is known, to the monastery of Clonenagh, where he died between 819 and 830. Rather than accept Warner's hypothesis of a raid by Donnchadh mac Briain on the monastery of Tallaght, I should prefer to believe, as being less improbable, that the Missal (that is to say, the greater portion of the MS. as we now have it) was written by this Oengus in Tallaght, that it was brought by him to Clonenagh, and that soon afterwards, while it was still too new to have acquired much of a reputation, it passed from Clonenagh to the older foundation of Terryglass at a time when both monasteries were united under the common abbacy of Aed mac Duib-dá-crích.

<sup>3</sup> Terryglass was originally in the diocese of Roscrea, which was later incorporated in the diocese of Killaloe (apparently by the Synod of Ráith Breasail, *ca.* A. D. 1110).

<sup>4</sup> Fiants Edw. VI, 1017. The Dominican convent of Lorrha was founded in 1269 by Walter de Burgh.

rent, the same were in 1590 leased to Thomas Lambyn (*ibid.* 5472). In 1599 they were leased to Sir Robert Napper (*ibid.* 6310), and in 1621 they were granted to William Dongan (Cal. Pa. Rolls Ja. I, p. 502a). In 1599 the Four Masters (p. 2094) speak of a prior of Lorrha (*prior Lothra*) who was probably identical with the lessee of 1578, and was perhaps a son of the lessee of 1552; they give his name as Seán mac Seáin mic Giollapátraice Uí Ógáin, and record that he was slain by one of the O'Kennedys. We hear nothing of the Lorrha Missal during these times of persecution, but it was probably at this period that it was hidden away in a place of safety in the locality. Its existence had long been forgotten when, as we shall see, it was fortunately discovered intact in its hiding-place in the eighteenth century.

In the year 1735 Aindrias Mac Cruitín, the well-known poet and *seanchaí*, who resided at Moyglass, near the western coast of Co. Clare, wrote a poem beginning *Go Cúig roimh Luis dá thugadh grásaibh Dé*, of which there is a copy in his own handwriting in H. 2. 5, p. 242.<sup>1</sup> The poem is in the nature of a prophecy of a bloody invasion of England (and perhaps of Ireland, too) which was to take place in the year 1745; and while, by a lucky guess, the poet did hit upon a year which was to be made memorable by Prince Charlie's effort to recover his throne, in every other respect the "prophecy" was a complete failure. The poem, to one who reads it in the autograph copy, appears not to have the slightest connection with our subject; but the titles prefixed in other copies make it abundantly clear that a connection does exist. The various titles that concern us are given at the end of the present paper, together with some other extracts dealing with the same subject. I here give an abstract of the information they convey.

All but one of the extracts given in the Appendix speak of a MS. which was in possession of O'Kennedy in Co. Tipperary. This O'Kennedy lived in Lorrha (B); otherwise in Lackeen (H), which is in the parish of Lorrha. The MS. was found by O'Kennedy "built into the wall of an ancient house or castle" (F). Various names are assigned to the MS., — 'the book of Ruadhán of Lorrha'

<sup>1</sup> I have published the text of the poem in "The Irish Monthly", March, 1925, p. 160. The author's title is *Aind[r]ias Mac Cruitín cct. chum a charad do bhl ag iarraidh feasa na haimsire atá ré teacht air*, 1735. According to our most reliable authority (H. 6 11, p. 23; written in 1754) Aindrias died in 1738.

(A), 'the Life of Ruadhán of Lorrha' (DE), 'the Testament of Ruadhán of Lorrha' (H). The MS. was a vellum one (F). It was written in Latin, but in Irish characters; and was a book of divinity or a missal (A). There was a brass *cumhdach*, or case, enclosing it, on which was an inscription (B); otherwise, there was an inscribed *fleasg*, or rod, of brass on the MS. (A, and cf. H). The purport of the inscription was that no one should open it (the case or the book) until it should open of itself, which it did about the year 1733 (AB, and cf. H).<sup>1</sup> The Irish scholars of Ormond all failed to read it (ACFG); and the finding of so remarkable a MS., coupled with the fact that no one could interpret it, was naturally much discussed in the neighbourhood and beyond it (FG). In the hope of solving the difficulty a gentleman named O'Meara<sup>2</sup> sent to Co. Clare for Aindrias Mac Cruitín,<sup>3</sup> whose expenses he liberally paid (F). Aindrias arrived at O'Kennedy's house, and he succeeded where the others had failed (ACFG).<sup>4</sup> Shortly after his visit to Lorrha Aindrias composed the poem alluded to above. According to himself it was written in 1735,<sup>5</sup> and was addressed to 'his dear friend' (unnamed),<sup>6</sup> who had asked him for a prophecy of future events; for Aindrias, like some other poets of his time, sought to combine the characters of *file agus fáig*, poet and prophet. But the MSS. in general, as I have said, connect the poem with O'Kennedy's MS. According to BD it was written after seeing the

<sup>1</sup> From this we may infer that, when it was discovered by O'Kennedy, the *cumhdach* was securely fastened, and was not opened for some time afterwards. When opened, it was evidently opened at the wrong end, for what was originally the under face of the *cumhdach* of our Missal is now detached and serves as a lid (Warner, p. xlv).

<sup>2</sup> The O'Mearas are associated with the district of Toomyvara (*Tuaim í Mheadhra*) in Upper Ormond.

<sup>3</sup> His kinsman and fellow-Clareman, Aodh Buidhe Mac Cruitín, was very probably still on the Continent at this date. He had assisted Begly in the preparation of the English-Irish Dictionary published in Paris in 1732.

<sup>4</sup> O'Curry tries to explain the difficulty of reading the MS. by saying, enigmatically, that it "had been opened on the back, so that it appeared to have been written from left to right" (F); O'Looney, by saying that, while the language was Irish, the characters were Greek! The real 'difficulty', of course, was the fact that (except for a few pages of Old Irish) the MS. was written entirely in Latin, so that the local "Irish scholars" (i. e. scribes and readers of modern Irish MSS.) could naturally make nothing of it.

<sup>5</sup> B dates it 1736.

<sup>6</sup> So also A. According to CF it was addressed to O'Meara.

MS. A<sup>1</sup> says that Aindrias claimed to have found his "prophecy" in the MS., though the writer throws some doubt on his veracity, and remarks regretfully that the prophecy was not fulfilled. What probably happened was that the poem, having been written soon after the poet had examined "St. Ruadhán's Book," was thought by contemporaries to have been inspired by a knowledge of what the MS. contained; and it is likely enough that Aindrias himself was not unwilling that his verses should thus have a fictitious importance attached to them.

That the MS. which was in possession of O'Kennedy of Lackeen<sup>2</sup> in 1735 is none other than our Stowe Missal does not admit of doubt. The castle of Lackeen, which is in excellent preservation, was rebuilt in the eighteenth century by one of the O'Kennedys.<sup>3</sup> A tombstone in the Dominican Abbey of Lorrha bore the inscription: "John Kennedy, founder of Lackeen Castle, died 1766."<sup>4</sup> In all probability it was during the rebuilding of the castle by this John O'Kennedy that the Missal was discovered, "built into the wall."<sup>5</sup> It may be added that one of the churches of the monastery of Lorrha—its ruins are still to be seen—stood "in the centre of the Lackeen estate", and near the castle.<sup>6</sup>

<sup>1</sup> Cf. also C.

<sup>2</sup> Lackeen was formerly the seat of Ó Cinnéide Fionn, as the head of the family was known in the sixteenth century. *O Cinneididh Fionn i. Brian mac Domhnaill o Leacaoin* is mentioned in a legal document of 1584 (App. to 29<sup>th</sup> Report of D. K. of Pub. Records, p. 40). John O'Kennedy, of Lackeen, gentleman, 1601-1602, is mentioned three times in *Fiants Eliz.* (6519, 6706, 6736).

<sup>3</sup> "This castle seems to be a modern building, erected on the site of an older residence", Gleeson, *Hist. of the Ely O'Carroll Territory*, p. 315.

<sup>4</sup> Dwyer, *The Diocese of Killaloe*, p. 518. Gleeson (*op. cit.*, p. 315) says apropos of this: "It is very difficult at the present day to trace the inscription, as the limestone covering of the tomb has become quite smooth".

<sup>5</sup> Compare the history of the Domhnach Airgid, which was concealed in an old castle in 1689 (Lawlor, *Proc. R. I. A.*, xxxiv, C, 108). So the Book of Lismore was found in a walled-up passage in Lismore Castle in 1814 by some workmen engaged in repairing the building. The Book of Dimma, which had belonged to the abbey of Roscrea, was found, enclosed in its *cumhdach*, in 1789 "among the rocks of the Devil's Bit Mountain in the county of Tipperary, carefully concealed and perfectly preserved" (Petrie, *Christian Inscriptions in the Ir. Lang.*, ii, 101).

<sup>6</sup> Gleeson, *op. cit.*, 262.



Subsequently (see G in Appendix) the Missal ceased to be the property of the O'Kennedys, and came into the hands of a Mr. Dalton, of Grenanstown, near Toomyvara and a few miles from Nenagh.

When we next hear of the Missal it is in the library of the Marquess of Buckingham at Stowe, in 1819, when Charles O'Connor described it in the Appendix to the first vol. of his Descriptive Catalogue of the MSS. in the Stowe Library. O'Connor, though he devotes many pages to the Missal, has very little information to give regarding its later history. The following is all he has to say in this connection (Appendix, p. 50):—"One subject yet remains to be discussed relative to this Missal. How or where it was discovered and to what monastery it belonged . . . To these questions our reply is, that it was discovered in Germany by the late John Grace, Esq., of Nenagh, in Ireland, who was formerly an officer in the German service; that he died without leaving any memorandum respecting the monastery or library where it was found; that in the continental wars, as well before, as since the French Revolution, many monasteries and libraries have been plundered by the soldiers of the contending parties, that their MSS. have been saved by their officers, and that several such MSS. have, in the course of the last fifty years, reached England."

Most of what O'Connor says in the extract just quoted is obviously the merest surmise; and his one definite statement, viz. that John Grace discovered the Missal in Germany, is evidently based on hearsay, for there was no written evidence. The Missal, after its arrival at Stowe, apparently lay quite unnoticed until O'Connor chanced on it shortly after he had printed the first volume of the Stowe Catalogue. The first Marquess of Buckingham had died in 1813; it is natural to assume that his son and successor, Richard (afterwards Duke of Buckingham and Chandos), for whom Charles O'Connor compiled the Catalogue, was consulted by the latter as to how the Missal had been acquired. Apparently the information he thus obtained was to the effect that the Missal had come from the Grace family and was connected with Nenagh, and that one of the family, John Grace, who had been an officer in the German service, might have acquired it on the Continent. That O'Connor was mistaken in thinking that the Missal came from the Continent I have no doubt. I suggest that it is much more probable that Sir Richard Grace, M.P., of Boley, Queen's Co., who

was one of the greatest book-collectors of his day,<sup>1</sup> acquired it from Mr. Dalton of Grenanstown, and that he subsequently presented it to the first Marquess of Buckingham. This Sir Richard "was nearly connected by blood" and "still more strongly bound by personal attachment to the noble owner of the Chandos estates".<sup>2</sup> He died at Southville, in Queen's Co., in 1801, aged 40. He had a younger brother John Grace, who was a Captain of Carabineers in the Imperial Service, and who died at Belgrade in 1789, aged 29;<sup>3</sup> this is, no doubt, the John Grace, "officer in the German service", whom O'Connor had in mind, and whom he wrongly describes as "of Nenagh".

To sum up, it is probable that the Missal was brought from Tallaght to Terryglass by the monk that wrote it, and that thence it was transferred to Lorrha in the twelfth century. It did not leave Ireland until it passed to the Stowe library, and it was never on the Continent. Nor is its history from the fourteenth to the nineteenth century the "absolute blank" that Warner (p. lviii) thought it to be.

#### APPENDIX

[In notes A to E, inclusive, are given various titles to Aindrias Mac Cruitín's poem as found in MSS. in the R.I.A. It should be borne in mind that these titles were composed by men who knew O'Kennedy's MS. only by hearsay. The author of the poem, who was the one man who could have given a first hand account of the MS., is silent regarding it.]

A. 23 K 51, p. 33.<sup>4</sup> *Aindrias Mac Cuiritín* (sic) *a ccontae an Clár* (sic) *cct. .i. an cuntus do chuir se cum carad ònmhuin do air an ttarra[n]gaire] do bí a leabhar Ruadhain Lohra, noch dfosguil*

<sup>1</sup> "At his death the number of volumes [in his library] amounted to nearly 9000", Sheffield Grace, *Memoirs of the Family of Grace*, p. 69.

<sup>2</sup> *ib.*, p. 79. It may be worth remarking that in the parish of Aghadoe, in Queen's Co., fifteen townlands belonged to the Chandos (Buckingham) family in 1796, and one townland (which adjoined the Chandos lands) to Richard Grace.—Ledwich, *Antiquities of Ireland*, 1804, pp. 512-513 (also in Mason's *Parochial Survey*, i, pp. 77-78).

<sup>3</sup> *ibid.*, p. 64. Cf. further Mason's *Parochial Survey*, iii, 691.

<sup>4</sup> This is probably the earliest of the R. I. A. MSS. containing the poem. It has a number of intelligent glosses (in Irish) on the text which I have not seen in any other copy.

uaidh féin, a tigh I Chinnéide, a ccontae Thiobraid Árann. Do bhí umorro fleasg práis air an leabhar céadna, 7 forfhógra sgríbhtha air gan an leabhar dfosguilt no go nfosglodh uaidh féin; 7 dfosguil sé san mbl- 173[.]<sup>1</sup> Gideadh níor bhfeidir le neach air bith a leigheadh, go ttainidh Aindrias 7 gur léighidh sé é, 7 go bhfuair (ma bfior do) an tarrangaire seo (faraoir na tainidh chum criche) an. As amhlaidh umorro do bí an leabhar sgríobhtha a ccló Gao-dhaldadh, ciodh go ma Laidion é, oir ba leabhar didheachta no aifrin e.

B. 23 M 14, p. 327 (19<sup>th</sup> cent.; scribe unknown). *Aindrias Mac Cruitin cct. 1736, iar bhfaichsin (sic) leabhar (sic) a tigh Uí Chinnéide a Lothar a Lothra (sic) a cconntae Thobhruid (sic) Aran, beagan bliaghan sul taimgh an prionnsa dá ngoirthidh an Pretender go hAlbain anno 1745. Do bhí cùmhdach práis air an leabhair (sic) so & forfhógra scríobhtha ar gan é osguilt go noscolfadh uaidh féin & d'osguil amhla sin timcheall na bliaghna 1733.*

C. 23 L 31, p. 143 (written by Seághain Mac Searradh, ca. 1790). *Aindrias Mac Cruitinn, chum Uí Mhedradh a tlaoidh tuairisg an leabhair innair chlis air aoin duine eille a léighiobh, 7 is ag Úa Cinnéide do bhí an leabhar céadna, cct.* The title in 24 B 11, p. 64 (written by Brian O'Looney) closely resembles this.

D. 23 B 38, p. 127 (written by Séamus Ó Murchúghadh, 1779). *Aindrias Mac Cuirtin cct. air nosgailt an leabhair, i. Beatha Ruadháin.*

E. 23 G 20, p. 292 (written by Mícheál Óg Ó Longáin, 1786). *Aindrias Mac Cruitin cct., ar fhaichsin an leabhair i. Beatha Ruadháin Lothra [dó added in a later hand] a tigh Uí Chinnéide a ccontae Thiobaraid Aran.* In 23 C 8, p. 230, written 47 years later (in 1833), the same scribe has a similar title, except that he adds, as was his habit in later years, a guess at the date, viz. *isin mbliadhain 1740*; in this case he is more nearly right than usual.

F. O'Curry, in cataloguing, ca. 1840, the MS. 23 L 31, makes the following observations (Hodges and Smith Catalogue, R. I. A., p. 365):—"This preface [viz. the title to Aindrias Mac Cruitin's poem; see C *supra*] is founded on the following facts. About a hundred years ago, a book was found built into the wall of an ancient house or castle in Ormond, by one of the O'Kennedys, which on being opened turned out to be an ancient Irish vellum

<sup>1</sup> Part of the next figure (probably 3 or 5) is visible, but most of it is lost owing to the fraying of the margin.

manuscript, but written in a manner that appeared strange and unintelligible to the best Irish scholars of the neighbourhood. The fame of the book and the difficulty of deciphering its contents spread all over Munster, upon which a gentleman of the name of O'Meara supplied Andrew Mac Curtin with a new suit of cloaths (*sic*), a horse to ride, and plenty of money to defray his expences; and thus equipped he set out towards O'Kennedys (*sic*), where having arrived and seen the book he at once discovered that from its long exposure to damp the back and front of it had been rendered alike, and that by chance, when found, it had been opened from [*corrected to on*] the back, so that it appeared to have been written from right to left, and read backward. The poem here given, and which is a sort of obscure Jacobite prophecy, is that which Mac Curtin gave to his patron on his return from his journey."

G. In an uncritical account of Aindrias Mac Cruitín Brian O'Looney (*ca.* 1860?) has the following remarks bearing on our present subject (24 B 11, pp. 4—6):—"A Gentleman of the name of Kennedy, who resided near Cashel, had an extraordinary manuscript in his possession, which was written in so occult a manner that nobody was found able to read it." O'Looney goes on to say that "an old Gentleman of the Reddans of *Coilleán Uí Shioda*, i. e. Collouny-heedy" told him that his father had "witnessed the presentation of" the MS. at Trinity College, Dublin, but no one in that institution was able to decipher it! "At all events the book in the hands of O'Kennedy had become (*sic*) the principal theme of the wonder-tellers of the day. At length our bard was requested to try it, and had the good fortune to explain its mysterious pages. The key (as it is called) by which he succeeded might simply remove all shade of romance from the story, and render the whole quite probable,—the writing having been in Greek characters, while the language was pure Gaelic; and it was customary with the ancient Irish to record their events in obscure forms, particularly such matters as related to prophecy."

H. The following note is found in an Irish MS. in possession of Lord Rossmore. Most of it was printed in 1902 by Eoin Mac Neill in his article on the Rossmore Manuscripts in 'Irisleabhar na Gaedhilge' ('The Gaelic Journal'), 159 (vol. xii), p. 55. The Rossmore MSS. are at present in London. For a complete copy of the note I am indebted to the kindness of Miss Ethel Stokes,



who transcribed it, and of the Very Rev. J. H. Lawlor, Dean of St. Patrick's, who procured the transcript for me. I wish also to thank Lord Rossmore, who was good enough to give the necessary facilities for the transcript to be made. The note is written in an eighteenth-century hand, but is undated and unsigned. It runs as follows:—"A book titled *Ughacht Ruagháin Lohra*, formerly left in the family of the Kennedys of the parish of *Leacaoín* in the Co. of Tipperary and barony of Lower Ormond, now in the custody of Mr. Dalton of Grenanstown in the barony of Upper Ormond and s<sup>d</sup> County. Said book once opened of itself and shut again. It is riveted, and wrote on the back forbidding any to open it. It is wrote in Irish."

THOMAS F. O'RAHILLY.

#### A NOTE ON THE "CULMEN"

As a slight supplement to Prof. Ó Máille's interesting article in *Ériu* IX, 71 sq., it may be worth while to call attention to a reference to the Culmen which appears to have been hitherto overlooked. The Annals of Tigernach, under a year which would correspond to A.D. 618, have the entry *scribend in Cuimín* (RC. xvii, 173), where for the last word we should pretty certainly read *Chulmin*, i. e. "the writing of the Culmen". Under the year immediately preceding the same Annals, as also the Annals of Ulster (s. a. 616), record the completion of the *Chronica* of Isidorus ("Usque ad hunc annum Esidorus scripsit cronicon suum", etc.); the correct date of this event is 615.

"Scotorum nobile culmen", applied to Clonmacnois in a Latin couplet quoted in the Annals of Clonmacnois, s. a. 1044, affords an illustration of the Hiberno-latin usage of the word.

T. F. O'RAHILLY.

## MISCELLANEA

### Co taite n-imbuilg

In his interesting article on the above in Rev. Celt. XLI, 24 ff., M. Vendryes has overlooked the following point. LL 82 a 15 which he quotes has *co tate imbuilg*, Acall. na Senórach, l. 2199, has *co tail[e] n-imbuilg*. These two instances indicate that the final consonant is *g*, not *c*. This is placed beyond doubt by Cormac's etymology *i. oi-meilg* (Sanas Cormaic, s. v. óimeic, ed. Meyer, 1000), where it is obvious that he recognizes the final consonant as *g*. A further indication is the rime *urd*: *imbule* (Hib. Minora p. 49), where the Harleian MS. has *imbuilg*.

The foregoing considerations make impossible the etymology of M. Vendryes, i. e. *imb-folc* (from *folcaim*, I wash, etc.), as *folc* has always *c* (= *cc*), W. *golchi*. The meaning and etymology will probably be found in the direction indicated by the first line of the stanza referred to: *fromad cach bíd iar n-urd* (where R has *bis* for *bíd*). This line points to an etymology *imb-bolg*, indicating that the feast would be in honour of a *bolg* or sack containing or about to contain the food supply of the year, or perhaps even a large *bolg* or paunch typifying such fruitfulness.

The word *tate*, *taite* (*taide*, Lc 456, Arch. III, 288) glossed *tosach* and usually rendered 'beginning', seems only to occur with reference to the beginning of the seasons, and in glossaries. Its original meaning is not clear.

### final -u

In discussing (Lang. of the Annals of Ulster, p. 89) the change of final -u to -a in the acc. pl. and its loss in the dat. sg. and nom. sg. of words like *Ériu*, I dated the change as about the year 1000. I had noted only one instance of the change of -u to -a in Saltair na Rann. There is however an instance of the change of -iu to -e in SR 3968, where *fri dé* rimes with *cairpde* (MS. *cairpdé*) earlier

*cairptiu*. This puts the beginning of the change as early as A.D. 987. The dat. *do duni* riming with *dia airi* in Serigl. Corculaind (Wind. I, 224, 21) shows that final *-u* had disappeared at the time this portion of the verse in the text was composed.

T. Ó MÁILLE

### ar-neut, in-neuth

Pedersen, Vergl. Gr. II 584, refers these to a root *neth-*, comparing Goth. *nīpan* 'to help,' Skr. *nāthā-m* 'help.' This admits no satisfactory explanation of the peculiar forms *ad-ro-neestar* Wb. 4c 35, *ar-ru-neestar* Ml. 50b 8. Thurneysen, Handb. 387, notes the absence of *-th-* in these latter compared with the active *-neithius*, etc. But the 3 sg. present shows a similar hiatus: *[ar-dom-neät anfulh uar* LU. 40a 25; *ar-id-neät* (: *déac*) FM i 260; *ar-dub-neät* ZCP. viii 196, 20 evidently consonating with *foät* and *roüt*, though the line is defective. Doubtless 1 sg. *-neut*, *-neuth*, is likewise disyllabic.

The difficulties vanish if we assume that the syllables were separated by an unwritten *h* < *s*: *ar-neät* < *air-ni-sed* (or *air-ini-sed*), the final *t* standing for delenited *d*, as in *ad-fét*, etc. The forms with *-th-* are due to syncope. *šd* = *hð* = *p*; thus *ar-neithet* < *air-ni-sedat*. In the verbal nouns *irnide*, *indnaide* (and M. Ir. *connaide*), the *-d-* is secondary, a voicing of *-th-* after the unstressed syllable.

So far the parallelism with *air-ni-guid* is complete.

<i>ar-neget</i>	.	.	.	.	<i>ar-neät</i>
<i>ar-neigdet</i>	.	.	.	.	<i>ar-neithet</i>
<i>irnigde</i>	.	.	.	.	<i>irnide</i>

There remains *-neëstar*, *-neästar*, which is easily explained as *-ni-šestar*; *siassair*, the form of the simplex, being quite isolated, has here been assimilated to the usual deponent ending *-estar* (cf. the variants *tarrasair*, *tarrastar*), and even this was obsolescent, for the whole of the pf. *ar-ro-neithius*, etc. had been remodelled on the analogy of the present *ar-nethem*, *ar-nethet*.

The meaning 'await' would develop naturally from 'sit before' or 'sit around.'



## ad-haim

The phrase *ad-haim a chossa* occurs three times in one of the Mongán stories, LU. 133b 12, 14 and 17. For *adhaim* Meyer conjectures 'I perceive, hear,' Im. Br. I 50, 91, and Contt. In reality it is 3 sg. 'he washes,' or 'he is washing'; cf. in *tan ad-n-aim duine a chossa 7 a lāma indlat mnsin*, Corm. s. v. *fothrucad*, Anecd. iv 597 = *atnaim*, LB. 267a 55. The silent *h* in *adhaim* marks the accented syllable, as in *indhi*, etc., and distinguishes the word from *ad-daim*, with which a variant in Im. Br. 47 confuses it; so in the YBL. copy the original reading *adaim* has in each case been altered by a later scribe to *addaim*, YBL. 193b 3, 5 and 8. Another compound is found in *ind-aim a lama*, Monast. of Tall. § 43, of which the verbal noun is *indmat*, ib. and Ml. 126c 16, later *indlat*.

OSBORN BERGIN

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 Scotti and Atecotti—A Correction

A superficial use of references provided in Holder's *Alt-celischer Sprachschatz* has betrayed me into a regrettable error in "Phases of Irish History", p. 151, where it is stated that "numbers of the Scotti and Atecotti took service under Roman commanders". The statement, as concerning the Scotti, is based on the words *Primi Scotti* in inscriptions cited by Holder, s. v. *Scottus*. My lack of acquaintance with the class of material to which these inscriptions belong, prevented my discovery of the error until I read the valuable and interesting paper by Professor J. Loth on "Les Graffites Gaulois de la Graufesenque". Primus and Scottus were the names of two of the manufacturers in the pottery industry which flourished at the place now called La Graufesenque, probably about A.D. 60-80. The lists in the graffiti contain the name of Primus. The name of Scottus is not found in them, but Scot(t)a is found, and since the lists contain the names Ma(n)suetus and Ma(n)sueta, we may infer that Scotta was kinswoman of Scottus, the partner or associate of Primus.

Beside *Scota* for \**Scotta*, the graffiti have also *tudos* and *tuddos*, *alos* and *allos*, *catili* and *catilli*, *panas* and *pannas*, *Cassidanno* and *Casidano*, *Carillos* and *Carilo*, *Mommo* and *Momo*.

EÓIN MAC NEILL



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