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*The Etruscan Brontoscopic
Calendar and Modern
Archaeological Discoveries*

BY JEAN MACINTOSH TURFA

The brontoscopic calendar of P. Nigidius Figulus, preserved in a Byzantine Greek translation by John the Lydian,¹ but believed since the Late Republican period to have descended from the *etrusca disciplina*, represents, at two removes, the longest coherent Etruscan document known, albeit no longer preserved in its original language. Its predictions cover not only the success or failure of crops, but touch on virtually all areas of Etruscan social and political life, referring even to servile revolts and urban classes. A superficial reading may tempt one to discount its authenticity – revolts, after all, seem to belong to the waning Etruscan states described by the Roman historians for the fourth through second centuries BC. Yet recent discoveries in the field, laboratory and museum are beginning to restore to the ninth through seventh centuries, the period when the calendar, and the *disciplina*, were codified and recorded, all the dramatic trappings of the calendar’s imagery. Further, recent studies by classicists have greatly enhanced our understanding of the milieu of first century Roman religious scholarship that generated the translation and preservation of Etruscan religious texts. Their findings emphasize the magnitude of Etruscan contributions to the culture of Rome, and have elevated the number of Etruscan literati and politicians known to have worked within the framework of the Late Republic.² Although Figulus must have been tempted to “adjust” some entries to carry Late Republican meanings, there is no straightforward correlation of dates with Roman political events, and no reason to doubt the general authenticity of the calendar’s often tedious entries. Today, the document affords an opportunity to survey some of the most exciting findings of the last century.

Past scholarship (e.g., Thulin, Pallottino, Pfiffig) acknowledged the document, but it remained a curiosity for scholars such as Piganiol and Heurgon, who remarked upon it in short but tantalizing articles.³ More recently, Italian classicists have produced analyses and translations;⁴ my English translation, cited below, will be incorporated in a monograph on the calendar.⁵

Brontoscopy was part of the Etruscan *disciplina*, the “*libri*” dictated by the mysterious, childlike seer Tages, perhaps at Tarquinia. Recently excavated contexts at the site of Tarquinia’s Pian di Civita have provided rare evidence to fuel debate over his historical actuality. However it originated, an Etruscan document recording the 360 thunder prophecies must have been written down before the mid-seventh century BC, probably in monumental form, like the later Capua “tile,” or duplicated on *libri lintei*, like the Zagreb “mummy binding,” for use by individual priests.⁶ Recent studies of these documents offer some parallels to the calendar’s entries, while the find of the *Tabula Cortonensis* illustrates the official posting, at least by the early 5th century BC, of documents relating to the land.⁷

Organized in twelve months, beginning in June,⁸ the calendar was intended to function as a reference for priests who interpreted the phenomenon of “thunder.” The stratified society of the calendar is comprised of urban factions that include “powerful men,” nobles, common people, women, and a servile class, alternately fomenting rebellion and stricken by plagues. Mention is made of a king, war, onslaughts of various noxious and “harmless” diseases, and a wide array of weather. Many crops, such as barley and wheat, fruit and nuts, are cited, usually in relation to predicted abundance or dearth. Herds, flocks, deer, wild birds and fish of both river and sea are also noted.

A sampling of entries in the Brontoscopic Calendar (Lydus De ostentis 27-38)

- June 7.** If in any way it should thunder, diseases will infect [men], but not many shall die.
And while the cereal crops shall be successful, the soft fruits shall dry up.
- June 9.** If in any way it should thunder, there will be a loss of flocks through being overrun by wolves.
- August 5.** If in any way it should thunder, it signifies that the women are the more sagacious.
- August 9.** If in any way it should thunder, it proclaims good health for men for a full year.
- August 12.** If in any way it should thunder, there will be an abundance of cattle fodder and of acorns, but in the first ripening season, it will go badly.
- August 19.** If in any way it should thunder, the women and the servile class will dare to undertake murders.
- August 26.** If in any way it should thunder, it signals war.
- September 5.** If in any way it should thunder, it signifies an abundance of barley but a decrease in wheat.
- September 23.** if it thunders, it foretells a time of need during the winter of the year.
- November 1.** If it thunders, it signifies discord for the city.
- November 16.** If it thunders, the creation of locusts and field-voles, to the king, danger, and there will be an abundance of grain.
- November 19.** If it thunders, welfare of women.
- January 7.** If it thunders, there will be a slave revolt and recurring illness.
- May 8.** If it thunders, ill-omened for the common people.
- May 28.** If it thunders, there will be a plenty of marine fish.

Fresh archaeological and technical evidence reflects the atmosphere of the agrarian and urban society that forms the background of the brontosopic calendar. For instance, we are now familiar with the intense, early Etruscan contacts with foreigners, as exemplified in Etruscan artifacts that were dedicated abroad, and in interaction and intermarriage with the earliest of the colonists from the eastern Mediterranean (Pithekoussai provides unequivocal evidence of this). New appraisals of Etruscan seafaring⁹ show a technically adept and well-traveled people venturing abroad even before the eighth century, while “princely” tombs and architectural finds attest to powerful rulers and states in full operation by the beginning of the seventh century. The crops, animals and diseases cited in the calendar may be identified in paleobotanic, faunal and other studies for several sites, richly supplementing the published data from archaic Rome.

Faunal studies from recent excavations show the presence in Iron Age Italy of all the crops and wild foods cited in the calendar. Most of the frequently cited species are now known to have been used in Italy since the Early Neolithic or Early Bronze Age, including barley and wheat, fava beans, lentils and wild acorns, and “soft fruits” such as grape, cornel cherry and fig. All these species, as well as the deer, “herds” and “flocks” of the calendar were firmly entrenched in settlement stores and funerary meals by the Recent/Late Bronze and Iron Ages, with wheat prevailing over barley long before the formative period of the Etruscan *libri*.¹⁰ Excavated Etruscan farmsteads of the Orientalizing-Archaic (and later) periods show the continuation of this type of agriculture.¹¹ Studies of food and cooking, begun with the year of the UN initiative on food and hunger,¹² have further contributed to the picture of a highly diversified agrarian and agricultural economy, the callous loss of which would be lamented by Cato and Pliny. Careful analyses of ceramic types have also asserted the reliance on and trade in seafood that is implied in the calendar’s prophecies on marine fish.¹³

Over 100 prophecies deal with disease, pests or dangerous animals; no more than ten predict good health or well-being. More than 100 entries cite crops, harvests or crop failures; as everywhere in the ancient Mediterranean, the success of the harvest must have been an abiding concern. Scarcity, want and suffering are as frequently met in the calendar as they must have been in real life, and current investigations of hunger and health in archaeological populations are beginning to emphasize this.¹⁴ One example is the little boy buried during the ninth century BC in the sacred area of Tarquinia’s Pian di Civita. He had survived three episodes of malnutrition and/or disease but was eating well by the time of his death from a brain aneurism.¹⁵

Discoveries of Iron Age habitation sites have reopened consideration of the size and density of the Etruscan population, and of the increasingly formalized social and civic organization, which formed a network communicating throughout the societies of the Tyrrhenian and Adriatic coasts, Po Valley, Apennines and beyond. The site of Sorgenti della Nova in southern Etruria, and related settlements illustrate the magnitude of what may surely be called “centers” as early as the Recent Bronze or Protovillanovan periods (and probably before.) There is also convincing evidence for a system of hierarchy of settlements in certain regions, and the for sophistication of administration that accomplished the “*grande opere collettive*” such as terracing, road-making, and excavation of grottoes and drainage works such as those identified at Sorgenti della Nova. This

settlement of about 15 hectares encompassed an estimated 300 closely situated huts, home to 1000-1500 people during the 11th-10th centuries BC.¹⁶ Socially stratified or not, populations of this size are sure to have generated disagreements and struggles.

Even the partially preserved site of Bolsena Gran Carro shows a densely planned habitation area, resembling a “foundation,” as the excavators note, and at some disadvantage for lack of greenspace between huts.¹⁷ Apart from the intensive social and probably legal arrangements that must have been needed to facilitate such close contact between neighbors, the plan has the earmarks of the forced movement of a settlement, perhaps pre-figuring the later relocations known to us at Marsiliana d’Albegna (c. 600), Murlo and Acquarossa (c. 500), and Orvieto/Bolsena (263 BC). A different, civically guided, forced relocation, from thatched huts into houses with tiled roofs, must have caused ill feeling in many seventh-century cities, and was perhaps accomplished through the inducements of a centralized authority. What social processes are reflected in the last ghetto huts that remained on the fringes of the elaborately roofed houses of Acquarossa?¹⁸

Social complexity and class systems in Late Villanovan/Orientalizing Etruria are now being scrutinized by epigraphers. Onomastic studies, well begun by Pallottino, Colonna, Rix and others, have been carried forward with new finds as well as reappraisals and re-dating of old ones.¹⁹ The earliest inscriptions, written ca. 700-675 BC and during the subsequent generation, comprise owner’s or donors’ names; in cases where a double name is used, we may reconstruct a complex society in which clans and classes are in effect. As attested in the Caeretan inscriptions analyzed by Marchesini, both men and women sometimes carried gentilicial titles, at least one of which also indicates foreign (Greek), and thus presumed servile origins.²⁰ Others used an ethnic or the name of a city: recognition of a city’s name by mid-seventh century must be the result of an even earlier network of stratified and interactive urban systems. Other names, like that of Laucie Mezentie, betray the Italic origins embedded within the aristocratic framework of the Etruscan cities.

Studies of craft and the industrial production of surplus goods, as indicated by Nijboer, Gleba and others,²¹ also point up the seventh-century results of an “urban” process of technical and commercial growth that began well back in the Bronze Age. Habitation sites, like that at Lago dell’Accesa,²² show the expression of social position in a hierarchy of dwelling types, as well as society’s commitment to the risks of surplus production for commerce. Mining and metallurgy, the subject of numerous studies, definitely require a firm support base and political directive. Poggio Civitate (Murlo) may represent the final stages of the process of establishing control over metallurgical resources, asserting it in innovative architectural engineering and design.²³

A king or ruler is cited in the calendar at seventeen entries; some are good, others clearly evil, but all imply an entrenched, central authority focused on a single man.²⁴ In addition to literary imagery of the eighth-century kings of Rome, Romans recognized the tradition that the insignia of rule had descended from Etruscan forms: the ivory throne, purple robe, *fasces*, scepter and *lituus*.²⁵ Ending the Archaic period are the Pyrgi plaques dramatically naming Thefarie Velianas, *zilath* of Caere, yet known in the Punic version as *mlk ‘l Kisry’* — king of Caere.²⁶ The *Elogia Tarquiniensia*, analyzed by Torelli, also give evidence of monarchy in latter days.²⁷ The evidence for earlier rulers may be sought in the archaeological record, for

instance in the heavily ornamented symbolic axes of bronze and amber found at Verucchio and Casale Marittimo.²⁸ Chariots were also symbols of political power, deposited in Italian tombs some generations after they were introduced by the Phoenicians into Cyprus and Spain.²⁹

At Tarquinia Civita, the ritual deposit of a sacrificial axe of antique type, a musical *lituus* and a shield is said to have been made by a “*personaggio di rango*,” whether this was part of a sanctuary or was a civic deposit of “*simboli regali*,” indicates an early date (ca. 680 BC) for complex society and sophisticated rituals.³⁰ The *lituus*, sometimes linked to the *mondo militare*, is only one of several symbolic grave goods used in Iron Age “warrior” funerals to express an individual’s autocratic or oligarchic power within a highly organized system. Recent evidence comes from the north as well as the south, and is mirrored to some extent in Latium and Campania.³¹

With rulers and uneasy classes come wars, although as yet no one has proven warfare to be the source of the fires that left debris on many seventh-sixth century sites.³² Thus far, our best evidence of warfare is the preparation for it, in the finds of arms, armor and chariots in the tombs of Villanovan and Orientalizing Italy.³³ Science and anthropology have begun to link archaeological finds with war and violence in Iron Age Italy;³⁴ the burial of a battered sword-fighter in the eighth century Tarquinia Civita complex is one such.³⁵

Women are cited, in very un-Roman fashion, at several points in the calendar, and evidence of female drivers, landowners and proprietors of businesses is increasing with mortuary and epigraphic studies.³⁶ As for the character of the slaves, we simply do not know the original Etruscan term(s) used by the calendar, although from the mid-seventh century on, funerary inscriptions do attest the names of many whose origins were foreign and who thus very likely arrived in Italy as slaves.

Specialist studies in the typology of metal artifacts show the wide circulation of people across the ethnic regions of Italy and into Europe,³⁷ with northern metal types appearing in southern Etruria and beyond, in part surely the result of aristocratic intermarriage, but in other cases reflecting commercial routes. Bietti Sestieri has demonstrated that, by the *beginning* of the Iron Age, Etruria was organized as a “federation of early states” with formal links to the Po Valley, Campania, and the settlements of Europe.³⁸

Essentially, the research of the last decades has pushed back the dates of all the subjects of the predictions recorded in the Etruscan brontoscopic calendar, creating a picture of the complexity of society long before the advent of writing and thus the recording of the calendar. The mention of those elements of earliest concern to the Etruscans and their gods supports the Iron Age authenticity of this document. How the lost Etruscan original came to be compiled and recorded, whether at the dictation of a Tages, or as the elaborated, oral tradition of generations of agricultural (and social) life, constitutes matter for a different study that will be informed by the 21st century’s Etruscological research.

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NOTES

1. Johannes Lydus, *De ostentis* 27-38. Tinnefeld 1999; Maas 1992. Text: edition of I. Bekker in Niehbuhr 1837.
2. Hall 1996; Macfarlane 1996; Rawson 1985, 309-312.
3. Weinstock 1950 and 1951 surveyed early attitudes. Heurgon 1959 and 1964, 227; Piganiol 1951.
4. Liuzzi 1983; Schmidt 2000; Della Casa 1962 — see review by Thesleff 1965.
5. See J. Turfa in de Grummond and Simon 2006, 173-190.
6. Cristofani 1995; Roncalli 1980; Pallottino et al., 1986; Roncalli 1985, 17-64.
7. Agostiniani and Nicosia 2000. Cf. Valvo 1988.
8. For the Etruscan calendar in general, see Edlund-Berry 1992; also Pedroni 1998.
9. For Etruscan nautical engineering that foreshadows Roman developments, and appeared earlier than similar Greek designs, see Turfa and Steinmayer 1999 and 2001; Turfa 2001. Etruscan technology seems surprisingly “modern,” see Turfa and Steinmayer 1996. Its roots lie in the platform villages and waterworks of Bronze Age Italy; see Turfa (forthcoming, 1999).
10. Zohary and Hopf 1993, *passim*. Bartoloni et al. 1997, with reference to other literature. Corridi 1994; Rottoli 1997 and Bedini 1997. Rendeli 1993, *passim*; *Gran Carro*, 325-351.
11. Barker and Rasmussen 1998, 167-172, 182-199 on Podere Tartucchino and other farms, with references.
12. E.g. *Alimentazione*; De Grossi Mazzorin 1995; Wilkins et al. 1995; Bartoli et al. 1997.
13. Pascucci 1998; cf. Brusadin Laplace and Patrizi Montoro 1977-78.
14. See Turfa (forthcoming, 2001). Climatological studies are beginning to appear in excavation reports for relevant Etruscan sites, e.g. Zippoli 1994.
15. Fornaciari and Mallegni 1997; cf. Mays 1998, 156-161, with bibliography.
16. Negroni Catacchio 1995 and 1982, 18-19.
17. *Gran Carro*, 209-221, 359-362. Relocation is also postulated for Chiusa Cima (San Giuliano), Pontecagnano and Verucchio.
18. See the suggestion on fire-codes by Wikander 1988 and 1992. With reference to the Roman Parilia, with Romulus torching the old huts to force his shepherds to move into a founded city, cf. Torelli 1987, 87-89. The finds of early housing developments at San Giovenale, Veii Piazza d’Armi and elsewhere show that the move from huts to houses was a concerted effort among Etruscans. See Steingraber 2000 and Donati 2000, 319-323.
19. Marchesini 1997, 116-166; see 154-159 and 117 note 3 for previous scholarship, such as Rix and Ampolo, on social classes and gentilicial expressions. Also Bagnasco Gianni 1996.
20. Marchesini 1997, 119, 130. Colonna 1975 and 1977; de Simone 1981. Any interpretation of the Demaratus issue injects foreign aristocrats and their stratified entourages into Etruscan society by the middle of the seventh century.
21. Nijboer 2000; Berkin 2003.

22. The settlement at Lago dell'Accesa (Camporeale 1997) includes tombs of elaborate type, houses of one to seven rooms. Accesa too was abandoned (with time for salvage) at the end of the 6th century BC. Camporeale (1997, 418) suggests an organization of the site into *quartieri*, each with its own organization and specialties, such as mining.
23. Cf. Turfa and Steinmayer 2002.
24. Torelli 1997; Stoddart 1989. For other studies of power and society, see Herring et al. 1991.
25. Dion.Hal., *AntRom* 3.59-62. See Tassi Scandone 2001, 201-231 on the Tarquinia Civita deposit.
26. *ET* 2:Cr 4.4.
27. Torelli 1975.
28. On power and its symbols in Etruria, see also Menichetti 1994; Naso 2000; Boiardi and von Eles 1997; Esposito 1999.
29. See Colonna 1997.
30. Bonghi Jovino and Chiaramonte Treré 1987, 77. M. Torelli in *Tarquinia. Testimonianze*, 172.
31. Volterra, Tomba del Guerriero, in Torelli 2000, 539-540 no. 12. Morigi Govi et al. 2000.
32. Two conflagrations are known at Bolsena Gran Carro, but most fires probably resulted from domestic accidents. At Murlo, tiled buildings of the late 7th century burned so fiercely and suddenly that barefooted men and shod women ran for their lives, leaving footprints on tiles that would never be fired; in at least one building, stacks of vases were never salvaged. See Nielsen 1987, 92-93; Berkin 2003, 7-26.
33. Stary 1981.
34. Rawlings 1999; Pallottino 1987.
35. Robb 1997 (Pontecagnano burials). Carman 1997. Bonghi Jovino et al. 1997.
36. For chariots and more, see Rallo 1989; Galeotti 1986-88.
37. See various *Prähistorische Bronzefunde*. Camporeale 2001. Pallottino et al. 1992.
38. Bietti Sestieri 1998.

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