

festivals and sacrifices, as determined by the calendar, were conceived to be necessarily connected with the same periods of the cycles of the sun and moon. "The laws and the oracles," says Geminus, "which directed that they should in sacrifices observe three things, months, days, years, were so understood." With this persuasion, a correct system of intercalation became a religious duty.

The above rule of alternate months of 29 and 30 days, supposes the length of the months 29 days and a half, which is not exactly the length of a lunar month. Accordingly the Months and the Moon were soon at variance. Aristophanes, in "The Clouds," makes the Moon complain of the disorder when the calendar was deranged.

Οὐκ ἄγειν τὰς ἡμέρας  
 Οὐδὲν ὀρθῶς, ἀλλ' ἀνω τε καὶ κάτω κυδοιδοπαῖν  
 "Ὅστ' ἀπειλεῖν φησὶν αὐτῇ τοῦς θεοῦς ἑκάστοτε  
 'Ὡνικ' ἂν ψευσθῶσι δειπνοῦ κἀπίωσιν οἴκαδε  
 Τῆς ἑορτῆς μὴ τυχόντες κατὰ λόγον τῶν ἡμερῶν.  
*Nubes*, 615-19.

CHORUS OF CLOUDS.

The Moon by us to you her greeting sends,  
 But bids us say that she's an ill-used moon,  
 And takes it much amiss that you should still  
 Shuffle her days, and turn them topsy-turvy:  
 And that the gods (who know their feast-days well)  
 By your false count are sent home supperless,  
 And scold and storm at her for your neglect.<sup>19</sup>

The correction of this inaccuracy, however, was not pursued separately, but was combined with another object, the securing a correspondence between the lunar and solar years, the main purpose of all early cycles.

*Sect. 5.—Invention of Lunisolar Years.*

THERE are 12 complete lunations in a year; which according to the above rule (of  $29\frac{1}{2}$  days to a lunation) would make 354 days, leaving  $12\frac{1}{4}$  days of difference between such a lunar year and a solar year. It is said that, at an early period, this was attempted to be corrected by interpolating a month of 30 days every alternate year; and Herodotus<sup>20</sup> relates a conversation of Solon, implying a still ruder mode of

<sup>19</sup> This passage is supposed by the commentators to be intended as a satire upon those who had introduced the cycle of Meton (spoken of in Sect. 5), which had been done at Athens a few years before "The Clouds" was acted.

<sup>20</sup> B. i. c. 15.