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# Conclusions

The genus *Ferulago* Koch is here accepted in the 1872 Boissier' delimitation, including thus *Lophosciadium* DC., and amounting to 39 species. No sub-specific taxa are described or accepted. As a preliminary study, with the purpose of finding also a sounder delimitation for the species of *Ferulago*, and for the separation of this genus from others, the author studied four structural characters in an adequate sample of *Peucedanum* and *Ferula* species compared with all those of the *Ferulago*' ones. Some trends with phytogeographical significances have been postulated for *Peucedanum*. On the other hand, it seems to the present writer that several *Ferula* species belong in reality to *Peucedanum*.

The four characters are: the form of the inflorescence; the final laciniae of the leaves; the involucre and involucels; the sheaths of the leaves.

The fourth character however was not taken into consideration for *Ferulago*, being insignificant in this genus.

In the systematic part of this work, described in Latin, and beginning with the botanical key (p. 61) the aforesaid structural characters play a very important part in the species delimitation. They are diagrammatically standardized in a "visiting card" on the headline of every species discussed. In this "visiting card" the vittae number of the fruit is also given, together with the signs for the type of inflorescence, for the hypsophylls and for the laciniae of the leaves. It is hoped that this graphical method will facilitate identification. During the preparation of this work (which was much delayed and

interrupted for personal and professional reasons), the "visiting card" was found useful and the author considers that it could be employed — with the previous choice of few "sui generis" characters — in more ambitious, comprehensive systematic works.

This method shows the practical use of the afore-mentioned characters. It is now hoped to give an idea of the interaction of them for the explanation of the species in *Ferulago*, possibly in correlation with the geographical distribution. A personal opinion has to be explained here with regard to "characters, viz. form and space": these two factual elements are essential for the revision of any group of plants: they are recorded in the botanical samples and in the collector's notes for the localities. But the third thief of the fable, the time during which those forms are supposed to have appeared, is not susceptible to any serious checking by the revisor in the absence of dated palaeobotanical evidence. For this reason the writer has sceptical mistrust of the over-employed term "evolution"; this word imposes a vectorial, hence irreversible concept of "form in relation to time" with a flavour of finality. For a so small taxon as *Ferulago*, with such a narrow field of ecological, vegetative and floral characters, to speak of "more or less evolved" species, or of evolutionary direction in it, etc., would seem to the author as unconvincing! Here therefore the term "ranking" is used to emphasize its modest and flat bi-dimensional meaning. The most repentant apology are offered in this respect, for some concepts previously discussed in the treatment of the species about the importance of some relative to others: it is ever more difficult to escape from the drift of viewing "Res naturae" as competing for prizes.

Beginning with the character No. 1, we are confronted with 3 types of inflorescence, as is often indicated in the text. The Type I, found in 17 species, is by far the most wide-spread, covering all the area of the genus. The Type III, not radically different from the first one, is present in only 10 species and is scattered through a fairly large portion of the genus area; for instance, just one species (*Ferulago lutea*) occurs across all the south-west shore of the Mediterranean sea, including the Iberian peninsula. The second type, on the other hand (12 species) is densely grouped in Anatolia, with a few species extending also to the east; one, *Ferulago phialocarpa*, very poorly represented, seems localised in Persian Kurdistan.

This apparently narrow geographical localisation of Type II is however countered by two taxa: *Ferulago nodosa* (for its distribution, see in the main text, p. 124) and *Ferulago brachyloba* of Spain. For an account of the odd affinity between *Ferulago armena* and this western species, see the *Ferulago syriaca* treatment (p. 156) what is there postulated.

The second structural character, the form of the involucre and of the involucl seems independent of the first one. The leaf segments which can be viewed only as a more or less easy character for the recognition of the species, are without any correlation with their geographical distribution and are of no help in grouping them in infrageneric taxa.

Re-assessing the number of vittae of the fruit, however, throws considerable light, (in the mind of the writer at least) on these structural characters. The species with relatively few vittae (§ *Anisotaenia* Boiss.) have leaves either very poorly expanded, or the last segments, the lacinias, reduced almost to nothing. This conformation is independant of ecological factors and is thought by the author to be a true ontogenetical link between those two generic characters. The species with few vittae also have the Type I inflorescence; *Ferulago contracta*, the only exception, is too poorly represented in herbaria for asserting unquestionably which type of inflorescence it possesses. In the key, it was placed in inflorescence Type III, but on flimsy evidence.

Involucre form also shows a correlation with vittae number the § *Anisotaenia* being strongly linked to the Type III (triangular involucre); only *Ferulago blanchiana* (also too poorly represented in herbaria) apparently having oblong involucre, and *Ferulago thyrsiflora*, with linear ones, lie apart. This Cretan species is clearly separated from the others of its section on that character, which here seems to the writer to have a sound phytogeographical significance. The § *Anisotaenia* is found in Anatolia and Iran, with *F. thyrsiflora* as an exception (see Fig. 14). On the other hand, the few species of *Ferulago* with linear involucre, falling in the three sections of the genus, do however share an odd geographical "excentricity" (see p. 57 and Fig. 15, 16). It seems almost as if the geography of some "privileged" characters could run through all the taxa independently of them, as a nerve will pass from the centre to the extremity of a body without influencing the surrounding organs.

Starting therefore from the geographically circumscribed § *Anisotaenia*, we can observe that an increase in the number of vittae, coincides with an enlargement of the morphology. Also noticeable is a "Western trend" in the genus with the increase of vittae number, since taking into account both the section *Anisotaenia* and *Eutaenia* (of relatively small vittae number), we encounter an impressive number of "Oriental" species ("oriental" for the purpose of this work, are the species growing to the East of the 25°E. Meridian). For the 25 species forming the aforesaid sections, only two are present on the 25°E. (*F. thyrsiflora*) and also to the west of that meridian (*F. nodosa*). But in the § *Ferulago* (14 species), where the vittae number is greater as well as to six oriental species, six are found on the West, while two (*Ferulago confusa* and *F. sylvatica*) on both sides of that line.

Finally, the author, sincerely knowing the unsatisfactory limits of this work, hopes nevertheless that it could be a first step towards a total revision of the genus *Peucedanum* on a morphological and phytogeographical basis.