

X. COMPOUND LEAVES AND STIPULES - PRIMITIVE OR DERIVED?

With considerable justification the woody Ranales are regarded as the most primitive angiosperm group and the features they possess tend to be accepted as primitive for the angiosperms as a whole. The latter view is probably justified in most instances, but it would be unwise to assume uncritically that the woody Ranales are primitive in all respects.

For example, because all woody Ranales possess them, simple leaves are regarded as primitive. There is less agreement on the primitiveness or otherwise of stipules because some woody Ranales possess them and others do not. However, if the view that the primitive angiosperm leaf is simple and exstipulate is correct then compound leaves and stipules must be regarded as derived. This may be so, but it should be noted that this would run counter to the general trend towards reduction in angiosperm evolution.

A study of the umbellifer genus Aciphylla in New Zealand (Dawson, New Zeal. J. Bot. 6, 1968, 450-458) inclines me to the view, although not to the conviction, that compound leaves and stipules are primitive in the angiosperms. Many species of Aciphylla have pairs of simple appendages arising from and continuous with the top of the leaf sheath. These have been called stipules and would be readily accepted as such if it were not for the fact that the subfamily Apioideae, to which Aciphylla belongs, is by definition exstipulate. These stipules in Aciphylla are quite unlike the pairs of membranous lobes sometimes developed at the sheath apex of other Apioideae. They are by contrast photosynthetic and morphologically indistinguishable from segments of the lamina. A few reduced species of Aciphylla have simple laminae and in an individual plant there may be leaves with two stipules, one stipule or none at all. Other species with simple laminae never have stipules. At the other extreme there are species with compound stipules, which in some cases may rival the lamina in size and degree of compounding. These latter suggest an interpretation of Aciphylla stipules, i.e. that they are the reduced lowermost pinnae of the lamina of an apetiolate leaf, which have become morphologically continuous with the sheath. This view is supported by the presence of a 'joint' between the insertions of Aciphylla stipules, which is true also of the other pinnae of the lamina, but not of the membranous sheath lobes of other Apioideae.

If this interpretation of the nature of Aciphylla stipules is valid then perhaps it is also valid for stipules

in general. It would follow that stipulate leaves would have been derived from at least ternately compound leaves and this would suggest that compound stipulate leaves are more primitive than simple exstipulate leaves.

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#### JOHANNES HENDRIKUS KERN, DOCTOR HONORIS CAUSA

On occasion of the 125th anniversary of the Royal Netherlands Botanical Society, the University at Nijmegen has granted dear colleague and collaborator Kern the doctorate honoris causa, a distinction well earned by his valuable contributions to the botany of the Netherlands and his basic work performed on Cyperaceae. For biographical notes and bibliography I refer to *Gorteria* 4 (1968) 69-72 and *Blumea* 17 (1969) 1-3.

#### SCIENTISTS AND SCIENCE FICTION

That the imagination of scientists has free reign is all to the good, but there should be some idea behind it, and not merely intended to be an inflation of advertisement of idiosyncrasies in order to claim enormous sums of public money for pseudoscience. It seems that the fiction of flying discs is now a definitely closed chapter as disclosed by several academies of science. More recently we had the scoop of living matter on the Moon and Mars; even Mercury is added to the rumours. We thought that this scoop was also abandoned, but recently it was again ordered that after return from the Moon's mountains aeronauts are put into quarantine, as germs might lie in wait in cracks and clefts ..... Biological and medical scientists of the Space Bureau must do something for their salary.

Setting order to resources and contamination of our own planet, to which mankind is bound forever, seems a more worthy though possibly less spectacular perspective.