

The family *Ricciaceae* Dum. is distinguished from other families in the order Marchantiales by the simply constructed sporophyte embedded within the thallus tissue. Until recently it has been generally accepted that the family comprises only two genera: *Ricciocarpus* Corda and *Riccia* (Mich.) L.

Ricciocarpus is monotypic, with the species *R. natans* (L.) Corda, and is separated from *Riccia* by its long pendant scales with serrate margins and the presence of oil cells in the scales and the thallus. *Riccia*, on the other hand, is a large genus, now divided into several subgenera and probably comprises as many as 200 species worldwide.

A third genus, *Pteroriccia*, based on *Riccia villosa* Steph., was recently recognized by Schuster (1984a, 1984b). His decision was made after only examining Arnell's (1963) text and figures, which, by his own admission, are not good. Schuster's reasons for separating this taxon from the other *Riccia* species are as follows:

(a) the distinctive dorsal epithelium of loose, erect cellular 'filaments' ('superficies dorsalis thalli velutina ob filamenta cellulae erecta isolata'); and

(b) the large erect and imbricate ventral scales with serrate margins (Fig. 21.1, 21.2) ('squamae ventrales ingenter, usque ad 1.5 mm long.; erectae (siccatatae super thallum incurvatae), apicibus eorum serratis').

According to Schuster, such scales do not occur in any *Riccia* species, but they are found in the aquatic form of *Ricciocarpus natans* (Fig. 21.8), to which there is, however, no close affinity. He is, therefore, of the opinion that this new genus is at least as different from *Riccia* as is *Ricciocarpus*, which is generally recognized as a distinct genus.

The following comments can be made on the characters used by Schuster to separate his new genus:

(a) the epithelium of *R. albomarginata* Bisch. was already described by Sim (1926) as consisting of free

'pillars of long empty cells about five cells deep'. In his key, Arnell (1963) uses the 'velvet-like' dorsal surface 'caused by free cell pillars' as a character for *R. albomarginata* and *R. concava* Bisch. He also refers to the free cell pillars in his description of *R. villosa* although he does not place it in his key with the aforementioned two species. A total of eight southern African species with loose dorsal pillars are now known and are grouped together in the section *Pilifer* Volk (1983).

(b) the scale margins in some southern African *Riccia* species vary from crenate, as in *R. okahandjana* S. Arnell (Fig. 21.3, 21.4) and *R. rhodesiae* S. Arnell (Fig. 21.7), to serrate in *R. villosa*, to having long multi-cellular appendages (Fig. 21.5 & 6) in an undescribed species collected at Victoria West and Springbok and on the Kamiesberg.

CONCLUSION

The loose dorsal 'filaments' are not peculiar to *R. villosa*; furthermore scale margins vary considerably in some species of *Riccia*. Therefore, a species exhibiting the characters mentioned by Schuster need not be placed in a separate genus and it is proposed that *Pteroriccia* be regarded as synonymous with *Riccia*.

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