BONNIEA

Porter, Meisterfeld, & Knoll 2003
p. 417

Genus BONNIEA new genus

Type species.—*Bonniea dacruchares* n. sp.

Other species.—*Bonniea pytinaia* n. sp.

Diagnosis.—VSMs with a curved "neck" and circular aperture.

Etymology.—In honor of Bonnie Bloeser, who first studied the Chuar VSMs.

Discussion.—The original rigidity of VSM tests (Martí Mus and Moczydłowska, 2000; Porter and Knoll, 2000) indicates that the curved neck of *Bonniea* is not diagenetic in origin, but rather that *Bonniea* tests were curved during the life of the organism.

In modern testate amoebae, test curvature may be a species-level character or it may vary intraspecifically. Curved tests in typically uncurved species are caused by unusual environmental factors, such as the presence of an obstacle encountered during the construction of the daughter test (R. Meisterfeld, unpublished observations). As a result, curved variants are rare (1 per 1,000 specimens). The regular form and relative abundance of test curvature in the VSM assemblage suggests that it is a species-level character, justifying its use as such here.

The two species of *Bonniea* are divided on the basis of length-to-width ratio and concavity of the lower wall. "Lower" refers to the side of the test to which the neck curves; Figure 7 provides an example of how length, width, concavity and curvature are measured. Clustering of specimens with respect to length-to-width ratio and concavity allowed distinction between *B. dacruchares* and *B. pytinaia* (Fig. 8). Supporting this division is a significant difference in aperture diameter ($P < 0.05$; two tailed *t*-test).

Many different modern testate amoeban species, both lobose and filose, have curved tests, including all species in the filose amoeban genus *Cyphoderia* (Fig. 9.24), many species in the filose family Psammonobiotidae, the lobose species *Nebela retorta* (Fig. 9.25), and the lobose genus *Lamtoquadrula* (Meisterfeld, 2002a, 2002b).

vase-shaped microfossil