

*Fenestrulina caseola* Hayward, 1988. Tilbrook, 2006, p.217, pl.46F, 47F.

**Fenestrulina caseola** Hayward, 1988  
Plates 46F; 47F

*Fenestrulina caseola* Hayward, 1988: 325, pl. 10, fig. d.

*Fenestrulina caseola*: Ryland & Hayward, 1992: 280, Fig. 26d.

*Fenestrolides caseola*: Soule, Soule & Chaney, 1995: 161.

Type material ? Part of Holotype: NHM 1996.4.25.14, Flic en Flac, Mauritius, 25 m.

Other material examined SBMNH 365645, 501-87; NHM (unregistered, SEM2001), Solomon Islands, no loc.

**Description** Colony encrusting, forming unilaminar sheets. Autozooids ovate or irregularly hexagonal, convex, distinct, separated by shallow grooves (0.45 x 0.35 mm). Gymnocyte inconspicuous, a very thin marginal border around each zooid. Frontal shield perforated by numerous large pores (ca 70), randomly placed, filled by irregular spinous processes merging in the centre and all but occluding the pores itself; an ascopore, with slightly raised rim, centrally, surrounded by an imperforate area of frontal shield, median projection square-shaped, ascopore foramen crescentic, both extremely denticulate. Primary orifice wider than long (ca 0.13 x 0.10 mm), arched distally, straight-edged or slightly convex proximally, small, smooth condyles seen in the proximolateral corners of the orifice; no oral spines. Avicularia not observed. Ovicell wider than long, hyperstomial, imperforate, embedded in frontal shield of distal autozooid, bordered by thickened rim and a series of occluded pores, grossly ribbed frontally, with a thickened transverse ridge proximally; aperture sometimes dimorphic, much wider than long, closed by maternal operculum. Ancestrulae similar in shape to autozooids only smaller.

**Remarks** *Fenestrulina caseola* is characterised by its porous frontal shield, its lack of oral spines and the morphology of its ovicells. It differs from *F. harmeri* (Winston & Heimberg, 1986), described from neighbouring Indonesia, in its lack of oral spines and its more grossly ribbed ovicell. Also the frontal pores in the Indonesian species are not occluded as they are in *F. caseola*. *F. castaticos* Gordon, 1984 from the Kermandec Ridge has a similar frontal shield structure to *F. caseola* but it differs from this species in the structure of its ovicell.

Liu *et al.* (2001) illustrate a species of *Fenestrulina* (as *F. infundibulipora* Canu & Bassler, 1929) similar to *F. caseola* in all aspects other than its size; the dimensions are twice that noted for *F. caseola* by Hayward (1988) and up to three times the dimensions noted above. *F. infundibulipora* is noted as having an ovicell with an ovicell "of the same nature as the frontal" (Canu & Bassler, 1929). Therefore, *F. infundibulipora* is not the species illustrated by Liu *et al.* (2001).

Scholz (1991) illustrates *Fenestrulina castaticos* from the Philippines; recorded as *F. infundibulipora* by Ristedt & Hillmer (1985). However, he does not illustrate the ovicells of the species he found which would clarify its true identity, there being several morphologically similar species present in the Indo-West Pacific area.

Liu *et al.* (2003) recently described two new species of *Fenestrulina*, *F. sinica* and *F. orientalis*, from Chinese waters, but both of these species produce spines, unlike *F. caseola*, and their ovicells do not produce the marginal ridge seen in Hayward's (1988) species.

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Soule *et al.* (1995) erected the new genus *Fenestruloides* to encompass certain species formerly assigned to *Fenestrulina*. *Fenestrulina caseola* was assigned to this genus by the authors. There appear, however, to be a number of inconsistent characters within the comments of Soule *et al.* (1995) that led to the belief that more than one genus is represented by the species they cite. Firstly, the presence or absence of oral spines seems understated as a character for generic diagnosis. The capability of producing these polymorphic zooids would seem to be a good diagnostic character to distinguish genera within this family. Secondly, and perhaps more importantly, the possession of an avicularium in the holotype specimen of *Fenestruloides morrisae* Soule, Soule & Chaney, 1995, the type species from Mexico, is another indication of a capability to produce polymorphs. Avicularia, or rather the lack of them, has always been a character that distinguishes *Fenestrulina sensu lato* (and so by inference *Fenestruloides*) from genera such as *Microporella*. The presence of an avicularium in *Fenestruloides* leaves the position and validity of this genus equivocal. Finally, Soule *et al.* (1995) also note that the ancestrula in *Fenestruloides* species can either be tatiform or take the form of a small autozooid. The presence of one or other of these would be a good character in generic diagnosis, as it clearly illustrates major developmental differences between groups of species. The type species of *Fenestruloides* produces a tatiform ancestrula but this is often overgrown by a small autozooid. All of this notwithstanding, it remains outside the remit of this study to undertake a full review of the species assigned to *Fenestrulina*. It is felt that *Fenestruloides* is an ill-conceived genus and is here rejected; further examination of the species cited by its authors and a more concise and rigorous diagnosis is required if it to be reinstated.

**Distribution** A single reproducing colony of *Fenestrulina caseola* was found from Anuha Reefs, Florida Islands being overgrown by *Hippopodina adunca*. A single ancestrula was also found, in the Solomon Islands, from an unknown locality. Originally described from a single, small colony by Hayward (1988) from Mauritius, a second colony of this species was recently recorded from Heron Island (Ryland & Hayward, 1992). Only three colonies of *Fenestrulina caseola* are known.

