Remarks

All specimens were found in beech forest. More collecting is required before the range of the species may be determined.

Pseudaneitea simrothi Suter, 1896.

1896. *Athoracophorus (Pseudaneitea) simrothi* Suter, *Proc. malac. Soc. Lond.*, II, p. 34, Pl. 4, figs. 3, 4.
1898. *Janella simrothi*, Plate *Zool. Jb.* (Anat. und Ontog.), Jena, p. 273.
1909. *Athoracophorus (Pseudaneitea) simrothi* Suter, *Proc. malac. Soc. Lond.*, VIII (5), p. 325.
1913. *Athoracophorus (Pseudaneitea) simrothi* Suter, Man. N.Z. Moll., p. 804, Pl. 31, fig. 11.
1937. *Pseudaneitea simrothi*, Powell, Shell. N.Z., p. 123.

No specimens of this species are available. Therefore a diagnosis only is given.

Diagnosis

Colour dull brownish-yellow, the papillae lighter. Head shield triangular, not extending to mantle area. Papillae very large, oval, rounded, crowded, 3–4 in each side field. Fifteen lateral grooves on either side.

Type. In the Suter Collection, Geological Survey, Wellington.

Locality. Collingwood.

Remarks

Suter described this interesting species from a single specimen, and was unable to find any more examples. Plate, in 1898, put forward the opinion that Suter's specimen was merely a juvenile example of *P. papillata* or *P. schauinslandi*. Suter did not agree with this, and stated that the large, oval, crowded papillae were distinctive. As Collingwood is well outside the known range of *P. schauinslandi*, and as the papillae in juvenile specimens of *P. papillata* are quite small and diminish in size towards the perinotum, *P. simrothi* may be regarded as a valid species.

Discussion

There are four genera and twenty-two species now included in the New Zealand and subantarctic Athoracophoridae, all of them classified on external features alone. The principal characters used to differentiate genera are the shape of the mantle area and the position of the anus relative to it, and though these characters appear at first sight to be superficial, a study of the genera erected on this basis reveals other differences between them. The genus *Athoracophorus* forms a unified group quite different from the other three genera; its constituent species possess only 10–15 lateral grooves, have a thinner skin, a general lack of papillae, and a head shield with no posterior median furrow. The genera *Pseudaneitea* and *Reflectopallium* do show some similarities in external form. The other genus, *Palliopodex*, differs markedly from all the above genera in the form of its reproductive system, and appears to be rather separate in character. For differentiation at the species level, other characters may be used. These include the number and form of the lateral grooves, skin texture, number and form of papillae (if any), presence or absence of anal grooves, shape of the head shield, and position of the anus. Colour may also be taken into account, but in some species, notably *Athoracophorus bitentaculatus*, it is rather variable, and too much reliance on it in the past has led to the erection of new species and subspecies which have later proved invalid. However, in other species, notably *Athoracophorus maculosus* n. sp., a distinctive, constant colour pattern is invaluable in the identification of poorly preserved specimens.

Radula characters proved useless for generic or specific differentiation. In any given species, characters such as the number of rows of teeth and the number of