

Notes on the Variation of the Outer Paleae in
Sabellaria cementarium

Leslie H. Harris
MBC, Applied Environmental Sciences, Inc.

One of the characteristics that is used to separate the various species of Sabellaria is the shape of the outer paleae. While examining 14 individuals of Sabellaria cementarium collected from a rock in 220 feet off Pismo Beach, the shape of the outer paleae was noted to change with the size of the worm. As the length of the worm increased, the number of teeth of the outer paleae decreased while the pilosity of the arista became denser (see Figure 1 below). This characteristic was consisted for all the outer paleae within each worm.

In addition to the outer paleae, the shapes of the middle and inner paleae also were examined. The shape of these paleae remained the same regardless of the size of the individual.

Later examination of 45 specimens of Sabellaria cementarium from scattered localities also supported these findings. Therefore, in view of this variability, the shape of the outer paleae should not be used to distinguish between species of Sabellaria.

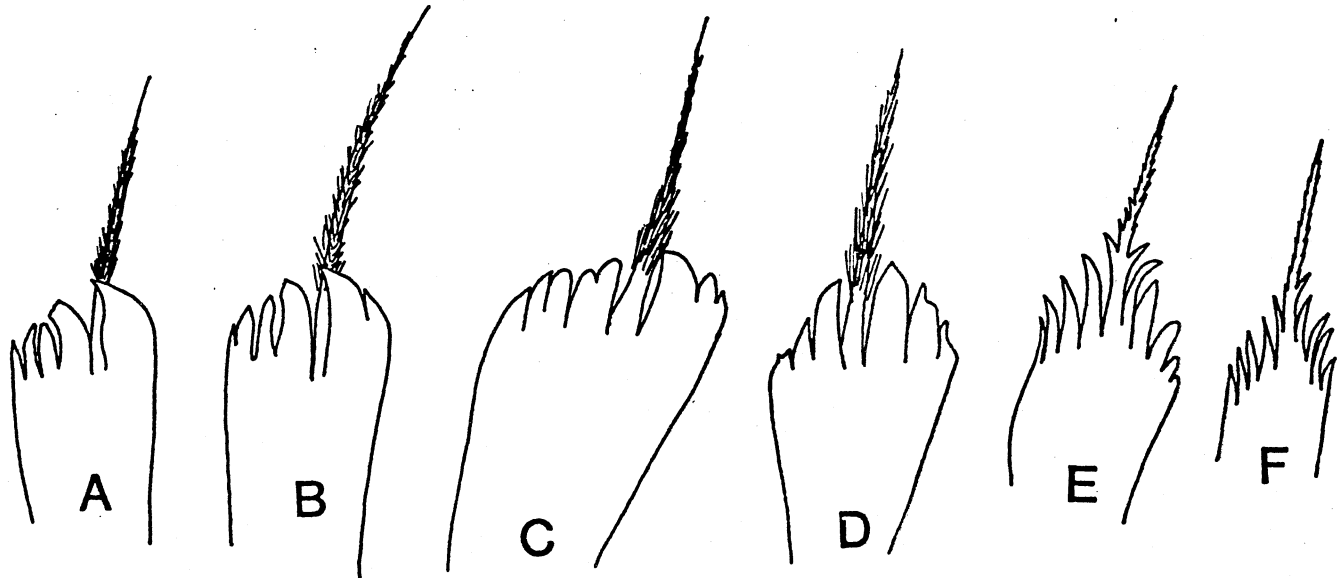


Figure 1. Variation of the outer paleae with body size (length in mm) of Sabellaria cementarium. Drawings are not to the same scale. A. 1 mm; B. 3 mm; D. 5-7 mm; C. 7 mm; E. 13 mm; F. 18 mm.

Neo

Sabellaria cementarium Moore, 1906
Sabellariidae

Vol. 4, No. 2,3

needs revision per ~~ET~~ kindly 1994

SCAMIT Code: ^w SCCR 55

Date examined: 13 May 1985
Voucher by: Leslie Harris

Literature:

- Moore, 1906
- Hartman 1944, 1969
- Berkeley and Berkeley, 1941
- Fauvel, 1927

Diagnostic characters: (Figure 1)

1. Opercular stalk with many black speckles.
2. Outer paleae flat plates with variable number of teeth and distal spinose arista. Middle paleae prolonged distally to a tapering point. Inner paleae are short and spoon-shaped.
3. Oral tentacles in 10-19 rows.

Related species and differences:

1. ^{Japan} Sabellaria gracilis Hartman 1944 (Figure 2).
 - Opercular stalk with few longitudinal purplish-brown dashes.
 - Outer paleae flat plates with marginal teeth and distal spinose arista. Middle and inner paleae similar, both sickle-shaped, tapering to a point, and rugose.
 - Oral tentacles in 6-7 rows.
2. ^{Spain} Sabellaria alcocki Gravier, 1907 (Figure 3).
(Reported off Corona del Mar by Berkeley and Berkeley, 1941.)
 - Middle paleae alternate long and short (only the middle paleae alternate, not the middle and inner paleae as stated in Hartman, 1969. See Fauvel, 1927; Hartman, 1944).
 - Indian Ocean; southern Europe; cosmopolitan in warm seas.
3. ^{Spain} Sabellaria nanella Chamberlin, 1919 (Figure 4).
 - Outer paleae distally finely pectinate with one process longer and thicker than the others. Middle paleae distally flat, platelike, suboval. Inner paleae adze-shaped, tapering to a hooked point.
 - San Francisco, littoral.
4. ^{Spain} Sabellaria spinulosa Leuckart, 1849 (Figure 5).
 - Anterior of body purplish-brown, speckled.

- Outer paleae broad, flat with marginal teeth and distal serrated arista. Middle paleae distally cusped and short. Inner paleae distally prolonged and expanded, terminating in an acute tip.
- Oral tentacles in 6-7 rows.
- North Atlantic, San Francisco Bay.

Additional notes:

1. In Hartman, 1969, p. 505, Figure 4 should be #5 and Figure 5 should be #4.
2. S. alcocki, S. nanella, and S. spinulosa are unlikely to be found in southern California, except as introduced species in or near harbors.

Distribution:

Southern California through Alaska and west to Japan, littoral and shelf depths; rocky substrate.

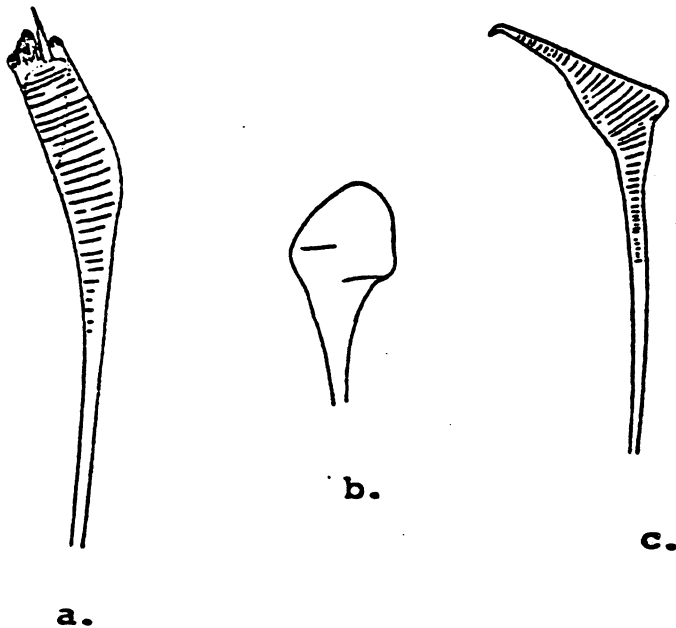


Figure 4. Paleae of Sabellaria nanella

- a. Outer
- b. Middle
- c. Inner

(from Hartman, 1969).

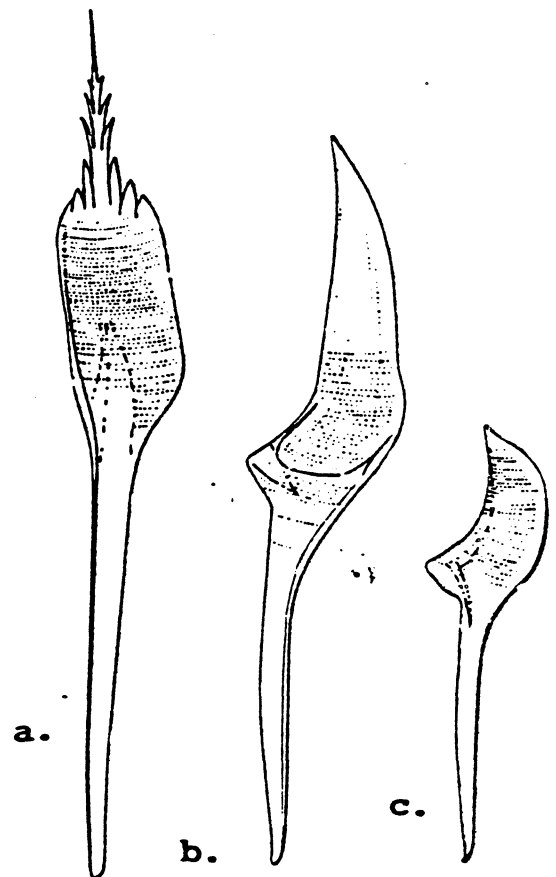


Figure 5. Paleae of Sabellaria spinulosa

- a. Outer
- b. Middle
- c. Inner

(after Hartman, 1969).