Table 1. Table of some taxonomic characters for selected species of the genus Acanthoptilum.

character	album	annulatum	gracile	scalpellifolium
pairs of leaves	≈75	≈170	?	?
Number of polyps per leaf	4-5	5-6	7-9 or >	7-9
siphonozooids	3/single rows	3-8/single or double rows	6-12	8 (white)
spicule color	none	pink	none	purple/pink
ratio of stalk/rachis	1/2	1/1	1/4	1/3

ORDER PENNATULACEA

Colonial octocorals unbranched, not firmly attached, consisting of a primary polyp (oozooid) that elongates to produce a barren, proximal stalk which anchors colony in soft substrate, and a polypiferous distal rachis from which secondary polyps arize, either directly or from ridgelike or broadly expanded polyp leaves. Gastric cavity of primary polyp divided into 2 primary and 2 secondary longitudinal canals by fleshy partitions at cent of which a more or less calcified horny axis usually is produced. Secondary polyps invariably of at least 2 kinds. Spicules smooth, 3-flanged rods or needles, rarely tuberculated; or small scales or plates. Axes of pennatulids formed of irregular, prismatic columns of calcareous material radiating outwrd from axis core, which seems to contain a higher proportion of organic matter.

SUBORDER SESSILIFLORAE

Sea pens with polyps standing separately and arising directly from rachis without being united near their bases by ridgelike or leaflike structures.

1. ANTHOPTILIDAE - Bilateral sea pens with polyps in transverse or somewhat diagonal rows on 2 sides of rachis. Sclerites absent except for minute oval bodies in interior of stalk. Axis round or quadrangular with rounded angles.

2. Chunellidae

3. Echinoptilidae

4. FUNICULINIDAE - Colonies elongated, slender; autozooids rather small, arranged laterally and ventrally on rachis, producing distinct calyces with 8 marginal teeth; siphonozooids infrequent. Spicules are prismatic needles. Axis quadrangular.

5. KOPHOBELEMNONIDAE - Sea pens with polyps bilaterally oriented on rachis but with some tendency toward radial symmetry; colonies clavate with axis.

6. PROTOPTILIDAE - Bilateral sea pens with autozoids longitudinally arranged in orne or more lateral rows. Spicules 3-flanged. Axis stout, rounded.

7. RENILLIDAE - Sea pens with slender stalk and oval or reniform foliate rachis bearing polyps on upper surface only. Axis absent. Spicules 3-flanged rods with may be more or less platelike.

8. SCLEROPTILIDAE - Rachis elongate, bearing autozooids closely arranged in indistinct whorls; dorsal track free of autozooids; siphonozooids scattered between autozooids.

9. STACHYPTILIDAE - Bilateral colonies with autozooids arranged laterally in transverse rows but not in longitudinal rows. Autozooids and siphonozooids with well developed, scalelike calyces. Spicules 3-flanged needles.

10. UMBELLULIDAE - Rachis is slender, elongate, bearing at its apex an umbelliform tuft of large autozooids; siphonzooids situated among autozooids and in groups or rows on barren parts of rachis. Spicules 3-flanged needles in polyp walls, rachis and stalk rind, and small oval bodies in deep layers of stalk. Axis round or quadrangular.

11. VERETILLIDAE - Stout, commonly clavate colonies without trace of bilaterality; polyps fully retractile, no calyces. Spicules of various types, none 3-flanged.

SUBORDER SUBSELLIFLORAE

Polyps united by their bases, situated in rows on lateral swellings or foliate polyp leaves.

1. PENNATULIDAE - Bilateral sea pens with well developed polyp leaves bearing one or more marginal rows of autozooids. which have calyces with marginal teeth formed by spicules; siphonozooids on rachis, not on leaves. Spicules minute oval bodies, plates, rods and prismatic needles.

2. Pteroeididae

3. VIRGULARIIDAE - Bilateral, with slender rachis; autozooids situated in transverse rows and united together by their bases, rachis beneath them raised into lateral swellings or small leaves. Spicules prismatic needles, small biscuit-shaped plates or entirely absent. Axis stout.

(from Bayer, 1956)