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Keys to European PARAONIDAE Cerruti, 1909

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KEY TO GENERA OF Paraonidae:

1a. Postchaetal lobes present only in chaetigers 1-4, as elongated, flattened lamellae, being absent in the following chaetigers; in posteriormost chaetigers noto- and neuropodia chaetigers shift dorsally; capillary chaetae of the anterior region is replaced by up to eight elongated curved brass-coloured thick spines per noto- and neuropodial bundle in the posteriormost chaetigers, producing a posterior armature.....***Aparaonis* Hartman, 1965**
[Genus not known in European waters; aberrant, probably not a Paraonidae.]

1b. Different from above: postchaetal lobes of chaetigers 1-4 not as elongated, flattened lamellae; posteriormost chaetigers do not shift dorsally; spines rarely present in notopodia.....**2**

2a (1b). Middle and posterior notopodia with acicular spines or lyrate chaetae.....**3**

2b (1b). Notopodia without acicular spines or lyrate chaetae; modified chaetae, if present, in neuropodia, not notopodia.....**4**

3a (2a). Median antenna present.....***Cirrophorus* Ehlers, 1908** [see key to species below]

3b (2a). Median antenna absent.....***Paradoneis* Hartman, 1965** [see key to species below]

4a (2b). Median antenna present; branchiae normally from chaetiger 4 (may appear from chaetiger 2-3 or from chaetiger 5); middle and posterior neuropodia with modified chaetae present or absent.....***Aricidea* Webster, 1879** [see key to subgenera below]
[Synonyms: *Aedicira* Hartman, 1957; *Allia* Strelzov, 1973 (not Walker, 1867 (Lepidoptera); not Schouteden, 1907 (Hemiptera)); *Acesta* Strelzov, 1973 (not H. & A. Adams, 1858 (Mollusca)); *Acmira* Hartley, 1981.]

4b (2b). Median antenna absent; branchiae from chaetigers 4-9 or missing.....**5**

5a (4b). Middle and posterior neuropodia with modified chaetae.....**6**

5b (4b). Middle and posterior neuropodia without modified chaetae.....
.....***Paraonides* Cerruti, 1909** [see key to species below]
[Synonyms: *Paraonella* Strelzov, 1973.]

6a (5a). Prostomium with ciliated bands; nuchal organs along posterior peristomial margin, indistinct from prostomium; modified neuropodial chaetae of different forms.....
.....***Paraonis* Grube, 1873** [one species]
.....***P. fulgens* (Levinsen, 1884)**
[Distribution: Irish Sea; English Channel; North Sea; Denmark (shallow water); Øresund; Baltic Sea; Bay of Biscay; Portugal; Mediterranean Sea; Adriatic Sea; Black Sea; Gulf of Mexico; Atlantic Coast of North America. Sandy sediments and beaches, intertidal to about 100 m.]

6b (5a). Prostomium without ciliary bands; nuchal organs along posterior prostomial margin, distinct from peristomial; modified neuropodial chaetae as curved modified spines (may be bidentate in some species of *Levinsenia*).....**7**

7a (6b). Prostomium with anterior margin crenulated, with distinctive thick, trilobed cuticle; prostomial terminal sensory organ absent; three prebranchial segments; branchiae short, narrow,

fingerlike.....***Sabidius* Strelzov, 1973**
[Genus not known in European waters.]

7b (6b). Prostomium not crenulated in the anterior margin; prostomial terminal sensory organ present; more than three prebranchial segments; branchiae fully developed, not fingerlike.....
.....***Levinsenia* Mesnil, 1897** [see key to species below]
[Synonyms: *Tauberia* Strelzov, 1973; *Periquesta* Brito & Núñez, 2002.]

GENUS *Aricidea* Webster, 1879

KEY TO SUBGENERA OF *Aricidea*:

1a. Branchial region with supplementary semicircular latero-dorsal lobes in the posterior region of the segment, inserted posteriorly to the cirriform postchaetal lobes [the posterior region and type of modified chaetae are not known, so the assigment to a subgenus is not possible].....
.....***Aricidea trilobata* Laubier & Ramos, 1974**
[Distribution: Western Mediterranean Sea (2090 m). Abyssal plain, 2090-2827 m.]

1b. Branchial region without supplementary semicircular latero-dorsal lobes.....**2**

2a (1b). Modified neurochaetae either pseudoarticulated with long, tapering appendage, or with curved tips with a subterminal spine on concave side of shaft; antenna normally with 1 or more distinct joints or articulations (absent in some species).....
.....**SUBGENUS *Aricidea (Aricidea)* Webster, 1879** [see key to species below]

2b (1b). Modified neurochaetae, if present, otherwise, either with terminal spine or arista, subterminal spine(s) on convex side, or heavy, curved, with or without various types of accessory filaments, teeth, bristles ot sheaths; antenna normally without distinct joints or articulations (present in some species).....**3**

3a (2b). Modified neurochaetae entirely absent, all neurochaetae capillaries without fringe or basal enlargement.....
.....**SUBGENUS *Aricidea (Aedicira)* Hartman, 1957**
[Genus not known in European waters.]

3b (2b). Modified neurochaetae present.....**4**

4a (3b). Modified neurochaetae thicker than corresponding capillary notochaetae, changing along the bundle from enlarged capillaries in the uppermost region, to thicker capillary chaetae abruptly tapering to an elongate thin terminal arista or mucron, and finally to shorter, curved chaetae with or without terminal arista in the lowest region.....
.....**SUBGENUS *Aricidea (Strelzovia)* Aguirrezabalaga, 2012** [see key to species below]
[Synonyms: *Allia* Strelzov, 1973 (not Walker, 1867 (Lepidoptera); not Schouteden, 1907 (Hemiptera).]

4b (3b). Modified neurochaetae always thicker than notochaetae and accompanying capillary neurochaetae, being as stout, curved hooks, with or without accessory distal spines, filaments, teeth, bristles, sheaths or pubescence.....
.....**SUBGENUS *Aricidea (Acmira)* Hartley, 1981** [see key to species below]
[Synonyms: *Acesta* Strelzov, 1973 (not H. & A. Adams, 1858 (Mollusca)).]

SUBGENUS *Aricidea (Acmira)* Hartley, 1981

KEY TO SPECIES OF *Aricidea (Acmira)*:

1a. Modified neurochaetae acicular and not aristate.....**2**

1b. Modified neurochaetae aristate or with a distal fringe of fine hairs or pubescence.....**5**

2a (1a). Modified neurochaetae with a distinct distal hood.....**3**
2b (1a). Modified neurochaetae lacking hood.....**4**

3a (2a). Distal region of modified neurochaetae with a truncated distal margin, not covered by a ciliated hood.....***A. (Acmira) cerrutii cerrutii*** **Laubier, 1966**
[Distribution: British Isles; North Sea; Skagerrak; Øresund; from Bay of Biscay to Portugal; Mediterranean Sea (4-6 m); Adriatic Sea; Aegean Sea; Red Sea; North Carolina; Gulf of Florida; Gulf of Mexico. Sand, shells and gravel, 2-531 m.]
3b (2a). Distal region of modified neurochaetae partly covered by a ciliated hood, without a truncated distal margin.....***A. (Acmira) cerrutii pacifica*** **Imajima, 1973**
[Distribution: Japan (30 m); Australia; Bay of Biscay; Portugal. Sandy sediments, intertidal to 163 m.]

4a (2b). Branchiae from the third chaetiger.....***A. (Acmira) simonae*** **Laubier & Ramos, 1974**
[Synonyms: *Aricidea punctata* Katzmann, 1973 (not *Aricidea punctata* Hartmann-Schröder, 1962 = senior homonym). Distribution: Mediterranean Sea (260 m); Adriatic Sea; Aegean Sea; Portugal; Bay of Biscay; North Sea. Muddy and sandy sediments, 20-1113 m.].
4b (2b). Branchiae from the fourth chaetiger.....***A. (Acmira) simplex*** **Day, 1963**
[Synonyms: *Aricidea neosuecica* Hartman, 1965; *Aricidea neosuecica nipponica* Imajima, 1973. Distribution: off South Africa (1240 m); from off Iceland to off Spain; Mediterranean Sea; Adriatic Sea; from NW Atlantic to Gulf of Mexico; Uruguayan and Patagonian shelf; Scotia Sea; Southern Ocean; Bering Sea; Kuril Basin; Japan; Caroline Islands; from British Columbia to California. Muddy sediments, 17-5540 m.]

5a (1b). Modified neurochaetae with a fringed distal hook, bearing long terminal and subterminal pubescence; a thin arista arising from the subterminal region of the hook (may be lost).....**6**
5b (1b). Modified neurochaetae without fringed distal hook or terminal and subterminal pubescence.....**7**

6a (5a). Antenna short, of uniform width along its length, round terminally, reaching from the posterior margin of the prostomium to about the midline of the first chaetiger; all branchiae of about the same length and shape, except the last pairs, which are smaller; interramal papillae present in the prebranchial and anterior branchial region (to see the interramal papillae it is necessary to dissect an anterior parapodium, from about chaetiger 7, which should be mounted and viewed from the anterior side).....***A. (Acmira) laubieri*** **Hartley, 1981**
[Distribution: North Sea (50m); Celtic Sea; Irish Sea; Bay of Biscay; Portugal. Muddy and sandy sediments, 50-117 m.]
6b (5a). Antenna long, slender and cirriform, reaching back to about chaetiger 4-7; branchiae foliaceous and pointed, becoming longer and thinner in the posterior branchial region, with filiform tip; interramal papillae absent.....***A. (Acmira) assimilis*** **Tebble, 1959**
[Synonyms: *Aricidea mutabilis* Laubier & Ramos, 1974. Distribution: Mediterranean Sea; Adriatic Sea; Aegean Sea; Levantine Sea (54 m); Portugal; Morocco; Molucca Islands; Western Pacific; Scotia Sea; Mexico. Muddy and sandy sediments, 3-1155 m.]

7a (5b). Modified neurochaetae bearing a basally enlarged subterminal arista, as a continuation of the convex side of shaft; subapical pubescence or hood sometimes apparent; antenna tapering from thickened base, sometimes with telescoping notches.....
.....***A. (Acmira) lopezi*** **Berkeley & Berkeley, 1956**
[Synonyms: *Aricidea fauveli* Hartman, 1957; (?) *Aricidea (Aedicira) punctata* Hartmann-Schröder, 1962; (?) *Aricidea (Aedicira) brevicornis* Hartmann-Schröder, 1962. Distribution: from Washington (20 m) to California; (?) Peru; (?) Sea of Japan; (?) Mediterranean Sea; Morocco; West Africa, from Guinea Conakry to South Africa; North Carolina; Gulf of Mexico. Muddy and sandy sediments, 12-1272 m.]
7b (5b). Modified neurochaetae with a distal hook bearing a terminal arista arising from the tip (may be difficult to see or lost), not as a continuation from the convex side of shaft; distal pubescence or hood weakly developed.....**8**

8a (7b). Antenna short, clavate, with two blunt, unequal lobes distally, subterminal lobe usually smaller, more slender; single notopodial small orbicular papilla posterior to and hidden by branchiae on branchial segments (not to be confused with postchaetal notopodial lobes; present, at least, in the

population from Florida; may be absent in the European population).....
.....***A. (Acmira) philbinae*** **Brown, 1976**
[Distribution: Atlantic coast of Florida (1 m); Gulf of Mexico; Irish Sea (doubtful). Seagrass beds and sandy sediments, 1-30 m.]

8b (7b). Antenna short, thickened in the middle and tapering to a pointed tip; notopodial orbicular postbranchial papillae absent.....***A. (Acmira) catherinae*** **Laubier, 1967**
[Synonyms: *Aricidea zelenzovi* Strelzov, 1968. Distribution: Western Mediterranean Sea (30-40 m); Adriatic Sea; Aegean Sea; Portugal; Bay of Biscay; Celtic Sea; North Sea; Skagerrak; Barents Sea; Kuril Islands; San Francisco to South California; Panama; Chile; Atlantic coast of North America; Gulf of Mexico; off Uruguay. Sandy and muddy sediments, 2-1929 m.]

SUBGENUS *Aricidea (Aricidea)* Webster, 1879

KEY TO SPECIES OF *Aricidea (Aricidea)*:

1a. Modified neurochaetae pseudoarticulate or geniculate, without subterminal spines and with tip bearing fine bristles and a long, tapering appendage; other modified neurochaetae with hooked tips, with or without long, thin mucron emerging from tip.....**2**

1b. Modified neurochaetae strongly curved with subterminal spines on concave side of shaft.....**3**

2a (1a). Antenna clavate, with bottle-shaped terminal papilla; 10-13 pairs of branchiae, with blunt tips; short postchaetal neuropodial lobes present to about chaetiger 10-14.....
.....***A. (Aricidea) pseudoarticulata*** **Hobson, 1972**
[Synonyms: *Aricidea fragilis mediterranea* Laubier & Ramos, 1974. Distribution: California (80 m); Gulf of Mexico; Bay of Biscay; Portugal; Western Mediterranean Sea; Adriatic Sea. Sand and muddy sand, 5-90 m

2b (1a). Coarse cirriform antenna; 25-60 pairs of branchiae, with pointed tips; well developed postchaetal neuropodial lobes, disappearing gradually in the postbranchial segments.....
.....***A. (Aricidea) fragilis*** **Webster, 1879**
[Synonyms: *Aricidea fragilis caeca* Wu, 1962. Distribution: Atlantic coast of USA (shallow water), from New England to Florida; Gulf of Mexico; West Africa; South China Sea; Yellow Sea; Western Mediterranean Sea; Adriatic Sea; Aegean Sea. Sandy and silty sediments, intertidal to about 54 m.]

3a (1b). Modified neurochaetae multidentate, with 1 to 3 accessory teeth; other modified neurochaetae pseudocompound; specimens generally with a reddish brown colouration.....
.....***A. (Aricidea) capensis bansei*** **Laubier & Ramos, 1974**
[Western Mediterranean Sea (5-30 m); Adriatic Sea; Aegean Sea; Portugal; West coast of Ireland. Sandy sediments, 3-54 m.]

3b (1b). Modified neurochaetae unidentate.....**4**

4a (3b). Prostomial antenna multiarticulate, reaching the third chaetiger; branchiae almost conical, with round tips.....***A. (Aricidea) wassi*** **Pettibone, 1965**
[Distribution: NW Atlantic, from Massachusetts to Virginia (14 m); Gulf of Mexico; California; Panama; Japan; Portugal; Bay of Biscay; North Sea; Ireland; Adriatic Sea. Muddy and sandy sediments, 10-1480 m.]

4b (3b). Prostomial antenna with 1 or 2 articulations, not reaching the second chaetiger; branchiae broad, clearly foliaceous with slender and short distal tip.....***A. (Aricidea) minuta*** **Southward, 1956**
[Distribution: Irish Sea (60 m); North Sea; English Channel; Kattegat; Øresund; western part of Baltic Sea; (?) Western Mediterranean Sea; (?) Adriatic Sea; (?) Aegean Sea; Mexico. Sandy sediments, intertidal to 70 m.

SUBGENUS *Aricidea (Strelzovia)* Aguirrezabalaga, 2012

KEY TO SPECIES OF *Aricidea (Strelzovia)*:

1a. Modified neurochaetae tapering abruptly, with terminal arista on the convex side of shaft.....**2**
1b. Modified neurochaetae tapering gradually, without terminal arista or, if present, as a continuation of the shaft.....**4**

2a (1a). Capillary chaetae very long, especially in the postbranchial region, where they can be more than 0.5 mm long; neuropodial postchaetal lobes absent.....
.....***A. (Strelzovia) longisetosa* Sardá, Gil, Taboada & Gili, 2009**
[Distribution: Western Mediterranean Sea (560 m). Submarine canyons, 560-990 m.]
2b (1a). Capillary chaetae not as long as above; neuropodial postchaetal lobes conspicuous, tuberculate or hemispherical.....**3**

3a (2b). Notopodial postchaetal lobes of the three prebranchial chaetigers showing a strong increase in size, from the first to the third; prostomium conical, anteriorly round and about as long as wide; prebranchial segments slightly wider than prostomium.....
.....***A. (Strelzovia) suecica suecica* Eliason, 1920**
[Synonyms: *Aricidea uschakowi* Zachs, 1925; *Aricidea heteroseta* Hartman, 1948. Distribution: Øresund (11-28 m); North Sea; British Isles; Shetland; Baltic Sea; Iceland; West Greenland; White Sea; Barents Sea; Novaya Zemlya; Kara Sea; Chuckchi Sea; Alaska; Tatar Strait; Sakhalin; Atlantic Coast of North America; Gulf of Mexico. Mainly muddy sediments, but also sand, 0.5-2258 m.]
3b (2b). Notopodial postchaetal lobes of the three prebranchial chaetigers with almost the same length; prostomium slightly wider than longer; prebranchial segments much wider than prostomium.....
.....***A. (Strelzovia) suecica meridionalis* Laubier & Ramos, 1974**
[Distribution: Western Mediterranean Sea (80 m); Aegean Sea; Bay of Biscay. Sandy and muddy sediments, 20-80 m.]

4a (1b). Branchiae absent.....***A. (Strelzovia) abyssalis* Laubier & Ramos, 1974**
[Distribution: Western Mediterranean Sea (2090 m); Galicia, NW Spain. Abyssal plains, 1140-2857 m.]
4b (1b). Branchiae present.....**5**

5a (4b). Branchiae present from chaetiger 5; modified neurochaetae of similar thickness than the notopodial capillary chaetae, being capillary chaetae attenuated and prolonged in a fine, long distant filament, with a pubescent area at attenuation level.....**6**
5b (4b). Branchiae present from chaetiger 4; modified neurochaetae usually thicker than the normal capillaries.....**7**

6a (5a). Antenna short, bifurcate, Y-shaped; notopodial lobes of prebranchial chaetigers reduced in chaetiger 1, long and cirriform from chaetiger 2; branchiae distally pointed.....
.....***A. (Strelzovia) mediterranea* (Laubier & Ramos, 1974)**
[Distribution: Western Mediterranean Sea (2110 m); Adriatic Sea; Aegean Sea. Muddy sediments, 275-2857 m.].
6b (5a). Antenna short, club-shaped; notopodial lobes of prebranchial chaetigers reduced in chaetigers 1-2, long and cirriform from chaetiger 3; branchiae distally blunt.....
.....***A. (Strelzovia) sardai* Aguirrezabalaga & Gil, 2009**
[Distribution: Bay of Biscay (1000 m); off Galicia, NW Spain; Western Mediterranean Sea. Submarine canyons, 1000-2857 m.]

7a (5b). Besides the postchaetal lobes, supplementary lobes are present in the branchial region, being dorsal, laterodorsal, interramal or prechaetal.....**8**
7b (5b). Only postchaetal lobes present in the branchial region, being notopodial and neuropodial.....**12**

8a (7a). Median dorsal short lobe, directed anteriorly, present on chaetiger 4.....
.....***A. (Strelzovia) claudiae* Laubier, 1967**
[Distribution: Bay of Biscay; Portugal; Western Mediterranean Sea (20-40 m); Adriatic Sea; Aegean Sea; Black Sea. Muddy sediments, 20-576 m.]

8b (7a). Median dorsal lobe on chaetiger 4 absent.....**9**

9a (8b). Interramal papilla present in the prebranchial and branchial region; noto- and neuropodial postchaetal lobes of anterior segments of similar length.....
.....***A. (Strelzovia) albatrossae*** **Pettibone, 1957**
[Distribution: Northwestern Atlantic (1317 m); North Carolina; North Sea; Skagerrak; Molucca Islands. Mud, ooze and sand, 143-2500 m.]

9b (8b). Interramal papillae absent in the prebranchial and branchial region; neuropodial postbranchial lobes absent.....**10**

10a (9b). Neuropodia of branchial region with 1-6 short prechaetal digitiform lamellae; notopodia with postchaetal lobes, only; buccal segment not distinct dorsally; modified neurochaetae from chaetigers 25-30.....**11**

10b (9b). Neuropodia without prechaetal lamellae; notopodia of branchial region, besides the postchaetal lobes, with one posterior short digitiform latero-dorsal lobe; modified neurochaetae from chaetigers 2-3; buccal segment dorsally distinct.....
.....***A. (Strelzovia) aberrans*** **Laubier & Ramos, 1974**
[Distribution: Western Mediterranean Sea (2090 m). Abyssal plains, 2090-2292 m.]

11a (10a). Antenna short, cirriform.....***A. (Strelzovia) monicae*** **Laubier, 1967**
[Distribution: Mediterranean Sea (200-300 m); Adriatic Sea; Aegean Sea; Portugal; Bay of Biscay (492-1113 m); California (590-1745 m). Muddy sediments, 200-1113 m.]

11b (10a). Antenna short, bifurcate, Y-shaped.....
.....***A. (Strelzovia) bifurcata*** **Aguirrezabalaga & Gil, 2009**
[Distribution: Bay of Biscay (492 m). Submarine canyons, 492 m.]

12a (7b). Notopodial postchaetal lobes long and cirriform from chaetiger 3, being double or biramous from the first branchial segment and in the following 7-8 chaetigers, with the ventral branch much shorter; neuropodial postchaetal lobes elongated, cirriform.....
.....***A. (Strelzovia) antennata*** **Annenkova, 1934**
[Distribution: Eastern Pacific, from Western Canada to Southern California; Western Pacific; off Japan; Sea of Okhotsk; Bay of Biscay. Soft sediments, 100-2045 m.]

12b (7b). Notopodial postchaetal lobes simple, sometimes with inflated bases, but not double or biramous.....**13**

13a (12b). Neuropodial postchaetal lobes of anterior segments long, fusiform; antenna long, slender and cirriform, normally reaching chaetiger 6-9; modified neurochaetae in the lower part of postbranchial bundles thicker than the other chaetae.....
.....***A. (Strelzovia) quadrilobata*** **Webster & Benedict, 1887**
[Synonyms: *Aricidea annae* Laubier, 1967. Distribution: Atlantic Coast of North America (3-52 m); Gulf of Mexico; Mid-Atlantic; Western Mediterranean Sea; Adriatic Sea; Aegean Sea; Bay of Biscay. Muddy and sandy sediments, 3-2900 m.]

13b (12b). Neuropodial postchaetal lobes of anterior segments short, tuberculate or hemispherical; all modified chaetae uniformly thick.....**14**

14a (13b). Antenna long; modified neurochaetae without pubescence at the external margin.....**15**

14b (13b). Antenna short; modified neurochaetae with or without pubescence at the external margin.....**16**

15a (14a). Antenna directed forwards, if pulled backwards can reach chaetiger 5-6; neuropodial postchaetal lobes ending at chaetiger 5-6; folds forming the posterior buccal lip originating from chaetiger 1; specimens generally whitish.....
.....***A. (Strelzovia) pseudannae*** **Katzmann & Laubier, 1975**
[Distribution: Western Mediterranean Sea; Adriatic Sea (525-550 m). Soft sediments, 66-2857 m.]

15b (14a). Antenna directed backwards, reaching chaetiger 9-10; neuropodial postchaetal lobes ending at chaetiger 11-13; folds forming the posterior buccal lip originating from chaetigers 1 and 2.....
.....***A. (Strelzovia) maialenae*** **Aguirrezabalaga & Gil, 2009**
[Distribution: Bay of Biscay (1040 m). Fine sediments, 492-1113 m.]

16a (14b). Modified neurochaetae slightly thickened, tapering abruptly to a fine terminal spine, without pubescence; antenna short, but sometimes reaching chaetiger 1.....**17**

16b (14b). Modified neurochaetae tapering abruptly to a laterally displaced terminal spine, with a thin pubescence in the region of abrupt tapering; antenna short, not reaching chaetiger 1.....**18**

17a (16a). Antenna cylindrical with a slight swelling of the proximal half and rounded terminally, extending to the midline of the first chaetiger; notopodial postchaetal lobes on chaetiger 1 short, slightly longer on chaetiger 2, and from chaetiger 3 longer; up to 26 pairs of branchiae; middle branchiae tapering abruptly to a long terminal filament.....***A. (Strelzovia) roberti*** **Hartley, 1984** [Northern North Sea (188 m); Bay of Biscay; Portugal. Fine sands, 25-188 m.]

17b (16a). Antenna short, wide, ovoid, distally digitiform, seldom reaching posterior margin of prostomium; first notopodial postchaetal lobes short, ovoid, becoming cirriform and more than two times longer from chaetiger 2; up to 22 pairs of branchiae; branchiae distally pointed, with long filiform tips, but not tapering abruptly.....***A. (Strelzovia) mirunekoa*** **Aguirrezabalaga & Gil, 2009** [Distribution: Bay of Biscay (512 m). Fine sediments, 480-968 m.]

18a (16b). Small, tuberculate postchaetal dorsal lobes on the first two prebranchial chaetigers (slightly longer on chaetiger 2); antenna enlarged basally, with a digitate tip; neuropodial lobes tuberculate, ending at chaetiger 13; anterior branchiae with pointed tips.....***A. (Strelzovia) mariannae*** **Katzmann & Laubier, 1975** [Synonyms: (?) *Aedicira hartmani* Strelzov, 1968. Distribution: Adriatic Sea (203 m); Bay of Biscay. Soft sediments, 100-300 m.]

18b (16b). First two notopodial postchaetal lobes well developed, digitiform; antenna short, slightly fusiform, distally round; neuropodial lobes tuberculate, ending at chaetiger 18-19; first 7-9 branchial pairs with branchiae distally rounded, next ones with tips distally thin, filiform.....***A. (Strelzovia) nekanae*** **Aguirrezabalaga & Gil, 2009** [Distribution: Bay of Biscay (492-495 m). Submarine canyons, 492-495 m.]

GENUS *Cirrophorus* Ehlers, 1908

KEY TO SPECIES OF *Cirrophorus*:

1a. Modified spines acicular, bearing long, thin accessory filament arising well below tip; branchiae from chaetiger 5.....***C. branchiatus*** **Ehlers, 1908** [Synonyms: *Paraonis (Paraonides) lyriformis* Annenkova, 1934; *Aricidea (Cirrophorus) aciculata* Hartman, 1957. Distribution: South Africa (117 m); Red Sea; Mediterranean Sea; Adriatic Sea; Aegean Sea; Portugal; Bay of Biscay; Irish Sea; Celtic Sea; off Britanny; Barents Sea; NW Atlantic Ocean; from North Carolina to Gulf of Mexico; off South America; from British Columbia to California; Western Mexico; Tatar Strait; Japan; Yellow Sea; Sea of Japan; slope of the Kuril Basin. Muddy and sandy sediments, 6-2780 m.]

1b. Modified spines lyrate, with pair of long tines; branchiae from chaetiger 4.....***C. furcatus*** **(Hartman, 1957)** ***sensu lato*****.....2** [Distribution: California (20 m); North Carolina; off New England; Bay of Biscay; Portugal; Western Mediterranean Sea; Adriatic Sea; Aegean Sea; Celtic Sea. Gravel and muddy sediments, 10-1830 m.]

2a (1b). Antenna reaching the anterior margin of chaetiger 1; branchiae with pointed tips; all neuropodial capillary chaetae similar in shape and width, being thin; colour pale cream....***C. furcatus*** **Type A** [British Isles.]

2b (1b). Antenna tiny, difficult to see, not reaching the anterior margin of chaetiger 1; branchiae with blunt tips; neuropodial capillary chaetae of two different kinds, some thin and with constant width, others being thicker basally and with a constriction in the middle, tapering to an elongated thin terminal arista or mucron; colour reddish brown.....***C. furcatus*** **Type B** [British Isles.]

GENUS *Levinsenia* Mesnil, 1897

KEY TO SPECIES OF *Levinsenia*:

1a. Branchiae absent; modified neurochaetae bidentate; notopodial lobes visible only in the last 1-3 chaetigers; pygidium rounded, with 3 anal cirri; modified chaetae from chaetiger 6..... .....***L. canariensis*** **(Brito & Núñez, 2002)**
[Distribution: Canary Islands (11-16 m); Selvagens Islands, Madeira. Sandy sediments and seagrass beds, 5-18 m.]

1b. Branchiae present in the anterior region of the body; modified neurochaetae unidentate, more or less curved; notopodial lobes visible along most of the body; pygidium tapering, with 2 anal cirri....**2**

2a (1b). Three pairs of branchiae (described as 3-5 in *Levinsenia flava* from Capbreton Canyon, varying with size of specimen), being short and with blunt tips, not reaching the basis of the opposite branchia on the same segment; modified neurochaetae slightly projecting from body, being short, strongly hooked.....**3**

2b (1b). More than 3 pairs of branchiae.....**4**

3a (2a). Modified chaetae from chaetigers 12-13; ratio lenght/width of branchiae (l/w ratio) = 1.6-2.9; notopodial lobes in branchial region about one-half the length of branchiae; long and finger-like notopodial lobes in the anterior part of the postbranchial region; shallow water species..... .....***L. tribranchiata*** **Çinar, Dagli & Açik, 2011**
[Distribution: Sea of Marmara (28 m); Levantine Sea. Mud and sandy mud, 17-100 m.]

3b (2a). Modified chaetae from chaetiger 15 (13-18, mostly 14-17 in the population from Capbreton Canyon, Bay of Biscay); l/w ratio = 2-4, mostly 2.5-3.5; notopodial lobes in the branchial region about one-third of the length of branchiae; short and rounded notopodial lobes in anterior part of postbranchial region; deep-water species.....***L. flava*** **(Strelzov, 1973)**
[Distribution: Sea of Guinea (1790 m); Bay of Biscay. Muddy and sandy sediments, 72-1113 m.]

4a (2b). Five or six pairs of branchiae (may vary with size of specimen), with five prebranchial chaetigers; branchiae short, with blunt tips, barely reaching the basis of the opposite branchia on the same segment.....**5**

4b (2b). More than six pairs of branchiae; branchiae long, clearly reaching the basis of the opposite branchia on the same segment.....**6**

5a (4a). Modified neurochaetae projecting clearly from body, weakly hooked, long, slightly curved, with thickened hood on convex side of shaft extending to chaetal tip; modified chaetae from chaetiger 12-16.....***L. kantauriensis*** **Aguirrezabalaga & Gil, 2009**
[Distribution: Bay of Biscay (495 m). Submarine canyons, 300-1113 m.]

5b (4a). Modified neurochaetae slightly projecting from body, being short, strongly hooked, with thin hood on convex side of shaft not extending to chaetal tip; modified chaetae from chaetiger 14-15. .....***L. demirii*** **Çinar, Dagli & Açik, 2011**
[Distribution: Sea of Marmara (32 m); Levantine Sea; Aegean Sea. Muddy and sandy sediments, 10-200 m.]

6a (4b). Modified neurochaetae without pubescent sheath on convex side, being slightly curved and projecting clearly from body; modified chaetae from chaetiger 15-16; 7-11 pairs of branchiae (5-8 prebranchial chaetigers), being longest in middle of branchial region, with acute tip; l/w ratio = about 7; with heavy pigmented posterolateral spots surrounding nuchal organs..... .....***L. oculata*** **(Hartman, 1957)**
[Distribution: California (15 m); South Africa; (?) Adriatic Sea; (?) Black Sea; (?) North Sea. Muddy sediments, 12-1272 m.]

6b (4b). Modified neurochaetae with pubescent sheath on convex side; without heavy pigmented posterolateral spots surrounding nuchal organs; all branchiae of about the same length, with more or less blunt tip.....**7**

7a (6b). Branchiae numbering 7-15 pairs (always fewer than 17).....**8**
7b (6b). Branchiae numbering 17-21 pairs; 8 prebranchial chaetigers; modified neurochaetae from chaetiger 30, being slightly curved, projecting clearly from body.....
.....***L. kosswigi* Çinar, Dagli & Açik, 2011**
[Distribution: Sea of Marmara (66 m); Levantine Sea. Mud, 66-70 m.]

8a (7a). Modified neurochaetae short, strongly curved, projecting slightly from body; 7-8 pairs of branchiae, 5 prebranchial chaetigers; modified chaetae from chaetiger 19-20.....
.....***L. marmarensis* Çinar, Dagli & Açik, 2011**
[Distribution: Sea of Marmara (54 m). Sandy mud, 17-54 m.]
8b (7a). Modified neurochaetae weakly hooked, long, slightly curved, projecting clearly from body; 11-15 pairs of branchiae, 4-7 prebranchial chaetigers; modified chaetae from chaetigers 20-26.....**9**

9a (8b). Between 9-15 pairs of branchiae (9-11 in British material); l/w ratio of branchiae = about 4; 4-7 prebranchial chaetigers (5-6 in British material); modified chaetae from chaetiger 20-26 (19-22 in British material).....***L. gracilis* (Tauber, 1879)**
[Synonyms: *Paraonos* (sic) *ivanovi* Annenkova, 1934; *Paraonis filiformis* Hartman, 1953; (?) *Paraonis gracilis* aristate Hartman, 1965; (?) *Paraonis gracilis minuta* Hartmann-Schröder, 1965. Distribution: Denmark (shallow water); North Sea; Skagerrak; Kattegat; Øresund; Baltic Sea; Greenland Sea; Iceland; off Faroe Islands; Sea of Norway; Barents Sea; British Isles; Bay of Biscay; Mediterranean Sea; Adriatic Sea; Aegean Sea; Black Sea; Red Sea; South Africa; Kara Sea; Laptev Sea; East Siberian Sea; Chuckchi Sea; Bering Sea; Sea of Okhotsk; Tatar Strait; Japan; Kuril Basin slope; Molucca Islands; New Guinea; Washington; California; Chile; Uruguayan shelf; Gulf of Mexico; Atlantic Coast of North America; off New England; Southern Indian Ocean; Scotia Sea; South Georgia. Many of these records need confirmation. Sandy and muddy sediments, 0.5-3860 m.]
9b (8b). Between 11-14 pairs of branchiae; l/w ratio of branchiae = mostly between 2.8-3.9; 7 prebranchial chaetigers; modified chaetae from chaetiger 22-24.....
.....***L. materi* Çinar & Dagli, 2013**
[Distribution: Aegean Sea (23 m). Sand and *Posidonia oceanica* beds, 19-37 m.]

GENUS *Paradoneis* Hartman, 1965

KEY TO SPECIES OF *Paradoneis*:

1a. Prebranchial chaetigers numbering more than three.....**2**
1b. Three prebranchial chaetigers.....**5**

2a (1a). Four prebranchial chaetigers.....**3**
2b (1a). Six prebranchial chaetigers; modified notochaetae acicular, lacking accessory structure.....
.....***P. drachi* Laubier & Ramos, 1974**
[Synonyms: (?) *Paraonis spinifera* Hobson, 1972. Distribution: Western Mediterranean Sea (115 m); Adriatic Sea; Aegean Sea; Bay of Biscay; (?) Washington to California. Muddy sediments, 20-800 m.]

3a (2a). Tines of modified notopodial lyriform chaetae of similar thickness along the whole body; postbranchial segments with one mid-dorsal fold.....**4**
3b (2a). Tines of modified notopodial lyriform chaetae of similar thickness in the anterior region of the body, one of the tines becoming much thicker and robust from chaetiger 10-11; postbranchial segments without mid-dorsal fold.....***P. bathyilvana* Aguirrezabalaga & Gil, 2009**
[Distribution: Bay of Biscay (508 m); Gulf of Ártabro, NW Spain; (?) Skagerrak. Mud, 421-576 m.]

4a (3a). Capillary chaetae extremelly long, often longer than 3 times the body width; 7 pairs of branchiae; tips of branchiae acutely pointed; base of modified notopodial lyriform chaetae with long hairs; postchaetal lobes digitiform from chaetiger 3, not decreasing in size on postbranchial

chaetigers, and becoming longer in central part of body.....
.....***P. hirsuta* Sardá, Gil, Taboada & Gili, 2009**
[Distribution: Western Mediterranean Sea (990 m). Submarine canyons, 990 m.]

4b (3a). Capillary chaetae about as long as body width, or slightly longer; up to 12 pairs of branchiae; tips of branchiae rounded; modified notopodial lyriform chaetae with short hairs; postchaetal lobes short, conical to triangular in chaetigers 1-4, lengthening up to chaetiger 4, longer from chaetiger 5, digitiform, slightly shorter in postbranchial region.....
.....***P. mikeli* Aguirrezabalaga & Gil, 2009**
[Distribution: Bay of Biscay (512 m); Gulf of Ártabro, NW Spain; (?) off Britanny; (?) Mediterranean Sea; (?) Adriatic Sea; (?) off NE America. Soft sediments, 492-1113 m.]

5a (1b). Modified notochaetae of two main morphological types, being clearly lyriform in the anterior segments, and harpoon-like in the posterior ones, as a highly modified form from the lyriform basal type, with an acicular stem and a subdistal lateral protusion from which originates an arista.....***P. armata* Glémarec, 1966**
[Distribution: North Sea; Ireland; English Channel; Brittany (shallow water); Bay of Biscay; Galicia, NW Spain; Portugal; Mediterranean Sea; Adriatic Sea; Aegean Sea; Black Sea; Red Sea; Pacific coast of Mexico. Sandy and muddy sediments, 0-1200 m.]

5b (1b). Modified notochaetae clearly lyriform along the whole body, but some slight modifications may present in some cases.....**6**

6a (5b). Lyriform chaetae with tines of different thickness in the posterior segments, with one of the tines becoming much thicker and robust than the other; notopodial postchaetal lobes short and tuberculate in the prebranchial, branchial and beginning of postbranchial regions, increasing in size along the body, in some cases reaching the same length of the capillary chaetae at the end of the body.....***P. ilvana* Castelli, 1985**
[Distribution: Mediterranean Sea (10 m); Adriatic Sea; Aegean Sea; Black Sea; Galicia, NW Spain; Bay of Biscay; British Isles; (?) South Africa. Sandy and muddy sediments, 0-250 m.]

6b (5b). Lyriform chaetae with tines of equal thickness along the whole body; notopodial postchaetal lobes on the branchial region of the body digitiform, with their size changing between the prebranchial, branchial and anterior part of postbranchial region.....**7**

7a (6b). Adults with 3 (seldom 4) pairs of branchiae, and 30-42 chaetigers; prebranchial notopodial postchaetal lobes short, tuberculate, becoming prominent and uniform in length on chaetigers 4-9, and then tuberculate and reduced in size on chaetigers 10-31, and finally progressively longer towards the end of body, beginning 3-5 chaetigers from end; pygidial region with nine cirri, consisting of 3 pairs arranged dorsolaterally to ventrolaterally, apparently representing dorsal podial lobes of three reduced segments, and three anal cirri, a single ventromedial one and a lateral pair; posterior neuropodia without hooks.....
.....***P. perdidoensis* (McLelland & Gaston, 1994)**
[Distribution: Florida, Gulf of Mexico (5.5 m); Canary Islands; Selvagens Islands, Madeira. Sandy sediments, 1-20 m.]

7b (6b). Adults normally with more than 4 pairs of branchiae, and more than 50 chaetigers.....**8**

8a (7b). Prebranchial notopodial postchaetal lobes digitiform, increasing in size over the three anterior chaetigers, of similar length throughout the branchial region, and decreasing in the anterior postbranchial region; branchiae with blunt tips; anal cirri short; posterior neuropodia without hooks.....***P. lyra* (Southern, 1914)**
[Distribution: Ireland (surface waters); Celtic Sea; Scotland; North Sea; west coast of Sweden; Bay of Biscay; Portugal; Mediterranean Sea; Adriatic Sea; Aegean Sea; (?) Vietnam; (?) Japan; (?) Atlantic Coast of North America; (?) NW Atlantic; (?) California; (?) Panama; (?) Venezuela; (?) South Africa. Many of these records need confirmation. Muddy and sandy bottoms, 0.5-1172 m.]

8b (7b). Prebranchial notopodial postchaetal lobes low, tuberculate, increasing in size from chaetiger 1 to 3, being digitiform from chaetiger 4, and not decreasing in the anterior postbranchial region; branchiae sharply pointed; anal cirri long; posterior neuropodia provided with single conspicuous curved hooks.....***P. eliasoni* Mackie, 1991**
[Distribution: Skagerrak (140 m); Øresund; Northern North Sea; Norwegian Trough; SE Barents Sea; Bay of Biscay. Mainly muddy sediments, but also sandy substrates, 5-1029 m.]

GENUS *Paraonides* Cerruti, 1909

KEY TO SPECIES OF *Paraonides*:

1a. Branchiae present from chaetiger 4.....***P. neapolitana* (Cerruti, 1909)**
[Distribution: Western Mediterranean Sea (5 m); Adriatic Sea; Aegean Sea; (?) Black Sea. Sandy sediments, shallow water to 200 m.]

1b. Branchiae absent.....***P. myriamae* Katzmann & Laubier, 1975**
[Distribution: Adriatic Sea (135 m); NW Spain; Bay of Biscay. Muddy sediments, 50-800 m.]