**Nannothrissa** Poll, 1965


**Diagnostic Features** : Dwarf pellonulines, reaching at most about 4 cm standard length (mature at only 2.2 cm in one species). Belly with very strong keel of scutes, the anterior scute beginning before base of first pectoral finray. Lower jaw prominent, teeth absent; no teeth on pre-maxillae, lower edge of maxilla, vomer or tongue. Lower gillrakers 20 to 31. Resembles *Pellonula*, which has pre-maxillary teeth and 7 pelvic finrays (cf. i 6).

**Biology, Habitat and Distribution** : Freshwater, in West African rivers and lakes (middle Zaire River and associated lakes); both species are known from acid waters (pH 4-5).

**Interest to Fisheries** : Probably none.

**Species** : Poll & Roberts (1976) recognized two species which appear to be separable on numbers of gillrakers, anal finrays and scales; however, preserved specimens are few:

- *N. parva* (Regan, 1917), West African freshwaters

**Nannothrissa parva** (Regan, 1917)


**Synonyms** : Microthrissa parva:Marlier, 1958:375 (Lake Tumba); Matthes, 1964:21 (Lake Tumba, ecology); Nannothrissa parva:Poll, 1974:150 synopsis); CLOFFA, 1984 (complete synonymy, refs to habitat, food).

**FAO Names** : En - Lake Tumba dwarf sprat.

**Diagnostic Features** : Body slender (depth about 20% of standard length). Scutes beginning at isthmus (or just behind), very strongly keeled (even at only 1.7 cm standard length), 13 to 15 + 6 to 8. Lower jaw projecting, toothless; no teeth on pre-maxillae or maxillae; second supra-maxilla as deep as maxilla blade and with long slender anterior shaft. Lower gillrakers 24 to 31. Pelvic fin with 6 finrays, its insertion about half eye diameter before dorsal fin origin; anal finrays 20 to 22. Scales in lateral series 35 to 40. Differs from *N. stewarti* in having more gillrakers (cf. 20 to 23) more anal finrays (cf. 17 to 19) and more scales (cf. 34 to 35). Resembles juveniles of *Pellonula vorax*, also of *Cynothrissa*, *Obaxothrissa*, *Microthrissa*, *Poecilothrissa* and *Potamothrissa*, but even small individuals of these have pre-maxillary teeth.

**Habitat and Biology**: Rivers and lakes, apparently in both running and still water, often in huge schools (Lake Tumba). Feeds on plankton (unicellular algae, diatoms and especially copepods, but also hydracaridins and aquatic insects). Breeds in Lake Tumba, ripe fishes being caught in late August and ripe and some spent fishes occurring in about mid-September (Matthes, 1964).

**Size**: To 4.2 mm standard length.

**Interest to Fisheries**: Hardly of much significance, although occurring in sometimes dense shoals.

**Local Names**: ZAIRE: Mempesu, Isandja (Lake Tumba).

**Literature**: Fourteen references in CLOFFA (1984).

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**Nannothrissa stewarti** Poll & Roberts, 1976


**Synonyms**: *Nannothrissa stewarti* - CLOFFA, 1984:47 (complete synonymy).

**FAO Names**: En - Mai-ndombe dwarf sprat.

**Diagnostic Features**: Body slender or moderate (depth about 25% of standard length). Scutes a little behind isthmus, very strongly keeled (even at 2.2 cm standard length), 9 + 7 to 9. Lower jaw very slightly projecting, toothless; no teeth on pre-maxillae or maxillae; second supra-maxilla as deep as maxilla blade and with long slender anterior shaft. Lower gillrakers 20 to 23. Pelvic fin with i 6 finrays, its insertion just below dorsal fin origin; anal finrays 17 to 19. Scales in lateral series 34 or 35. Differs from *N. parva* in having fewer gillrakers (cf. 24 to 31), fewer anal finrays (cf. 20 to 22) and fewer scales (cf. 35 to 40). Resembles juveniles of *Pellonula vorax*, also of *Cynothrissa*, *Odaxothrissa*, *Microthrissa*, *Poecilothrissa* and *Potamothrissa*, but even small individuals of these have pre-maxillary teeth.
**Geographical Distribution**: West African freshwaters (Lake Mai-Ndombe or Inongo near Ipeke, Zaire system).

**Habitat and Biology**: Lacustrine in acid waters (pH 4). More specimens and data needed.

**Size**: To 2.25 cm standard length.

**Interest to Fisheries**: -

**Local Names**: -

**Literature**: Apparently not mentioned since its original description in 1976.

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**Poecilothrissa** Regan, 1917


**Diagnostic Features**: Small pellonulines, reaching about 5 cm standard length. Belly with fairly strong keel of scutes, the anterior scute beginning under or before the base of the last pectoral finray. Lower jaw only slightly or not at all prominent, rising steeply in mouth, with small teeth at front; pre-maxillae with a single row of small teeth; maxilla blade slender, its depth more than 3 times in its length, its upper edge with a distinct flange against which the lower edge of the antorbital bone curves outward; second supra-maxilla small, spatulate, with a long anterior shaft. Lower gillrakers 17 to 24. Pelvic finrays 7, its insertion a little before dorsal fin origin. Scales large, in lateral series 27 to 34. Resembles *Microthrissa* and *Potamothrissa*, which have more scales (36 to 42), also *Microthrissa* is deep-bodied and *Potamothrissa* has almost no anterior shaft to the second supra-maxilla. *Pellonula* has a deeper maxillary blade and a more diamond-shaped second supra-maxilla.

**Biology, Habitat and Distribution**: Freshwater, in West African rivers (most parts of Zaire system) also lakes (Lake Tumba, Lake Mweru); schooling.

**Interest to Fisheries**: Little or none.

**Species**: In the review by Poll (1974), three species were recognized, but Poll, Teugels & Whitehead (i.e. CLOFFA, 1984:50) added *P. eupleura* (Löhnberg & Rendahl, 1920) from the ‘lower Congo’; however, it seems more likely that the four known specimens are *P. congica*:

- *P. centralis* Poll, 1974, West African freshwaters
- *P. congica* Regan, 1917, West African freshwaters
**Poecilothrissa centralis** Poll, 1974

**Poecilothrissa centralis** Poll, 1974, Bull Acad r Belg Cl Sci., (5)60:151, fig. 1, map 1 (Lake Tumba region and Ruki River, Zaire system).

**Synonyms** : Poecilothrissa congica Regan 1917:202 (one of the syntypes misidentified); Poecilothrissa centralis - CLOFFA, 1984:50 (complete synonymy).

**FAO Names** : En - Central Zaire pellonuline.

**Diagnostic Features** : Body slender (depth 20 to 24% of standard length). Scutes strongly keeled, beginning under pectoral fin base, 10 + 10 or 11. Snout rather acute. Lower jaw slightly projecting, with small teeth; pre-maxillae with a single row of small teeth; maxilla slender, its blade a little over 3 times as long as deep, upper edge slightly ridged (flared outward); second supra-maxilla slender, spatulate, with distinct anterior shaft. Lower gillrakers 21 to 24. Differs from **P. congica** mainly in having a sharper, more acute snout and more gillrakers (cf. only 17 to 19, rarely 20 in **P. congica**). **Nannothrissa parva** from the same area has no teeth on the pre-maxillae.

**Geographical Distribution** : West African freshwaters (restricted to the region of Lake Tumba and the Ruki River, also the Zaire River at Mbandaka and its nearby tributary the Busira as far up as Bokungu on the Tshuapa branch).

**Habitat and Biology** : Rivers and lakes, apparently in both running and still water; like **Nannothrissa parva**, it seems to occur in rather acid waters. More data needed.

**Size** : To 5.7 cm standard length.

**Interest to Fisheries** : Probably none.

**Local Names** :

**Literature** : Apparently not mentioned since its description in 1974.
**Poecilothrissa congica** Regan, 1917


**Synonyms** : Poecilothrissa congica - Poll, 1974:147 (synopsis); CLOFFA, 1984:50 (complete synonymy, refs to habitat and anatomy). Possibly Microthrissa eupleura Löhnberg & Rendahl, 1920 is this species, in which case the name should be P. eupleura.

**FAO Names** : En - Bigscale pellonuline.

**Diagnostic Features** : Body slender (depth about 20 to 24% of standard length). Scutes strongly keeled, beginning under pectoral fin base, 11 or 12 + 9 or 10. Snout rather blunt. Lower jaw not projecting, included in upper when mouth closed, with small teeth; pre-maxillae with a single row of small teeth; maxilla slender, its blade more than 3 times as long as deep, upper edge quite strongly ridged (flared outward); second supra-maxilla slender, spatulate, with distinct anterior shaft. Lower gillrakers 17 to 19 (rarely 20). Differs from P. centralis and P. moeruensis in having a distinctly blunter snout, the lower jaw not projecting; also fewer gillrakers in P. centralis (cf. 21 to 24). Species of Potamothrissa have little or no anterior shaft to the second supra-maxilla, species of Microthrissa are much deeper-bodied, and other pellonulines have a deeper maxilla blade without a dorsal flange.

**Geographical Distribution** : Freshwater, in West African rivers (most of Zaire system, but apparently absent from the Lake Tumba area (P. centralis) or in the Luapula-Mweru system (P. moeruensis); known from almost the mouth of the Zaire (around Boma) to the upper parts of the Lualaba).

**Habitat and Biology** : Rivers, but perhaps not in lakes. More data needed.

**Size** : To about 6 cm standard length.

**Interest to Fisheries** : Probably none.

**Local Names** : -

**Literature** : Twenty references to the species in CLOFFA (1984).
**Poecilothrissa moeruensis** Poll, 1948


**Synonyms**: *Poecilothrissa moeruensis* - CLOFFA, 1984:50 (complete synonymy).

**FAO Names**: En - Lake Mweru sprat.

**Diagnostic Features**: Body slender (depth about 20 to 25% of standard length). Scutes strongly keeled, beginning just behind base of last pectoral finray, about 10 + 8. Snout rather pointed. Lower jaw slightly projecting, with small teeth; pre-maxillae with a single row of small teeth; maxilla slender, its blade a little more than 3 times longer than deep, upper edge a little ridged (flared outward); second supra-maxilla slender, spatulate, with distinct anterior shaft. Lower gillrakers 18 to 20. Resembles small *P. congica*, which has a much blunter snout and more anal finrays (18 to 21; cf. 16 to 18). Conspecific in Lake Mweru with *Limnothrissa stappersi*, which has more gillrakers (22 to 25) and no distinct keel before the pelvic fins.

**Geographical Distribution**: Freshwater, in one West African lake and perhaps its tributaries (Lake Mweru).

**Habitat and Biology**: Lacustrine, but perhaps also in small streams or rivers feeding Lake Mweru. More data needed.

**Size**: To about 3.5 cm standard length.

**Interest to Fisheries**: Clupeoid catches in Lake Mweru have increased since 1980 and may now yield 3 500 tons annually; *P. moeruensis* must contribute to this.

**Local Names**: -

**Literature**: Nine references to the species in CLOFFA (1984).
**Microthrissa** Boulenger, 1902


**Diagnostic Features**: Small or medium-sized fairly deep-bodied West African pellonulines, reaching about 10 cm in one species. Belly with strong keel of scutes, the anterior scute(s) beginning before base of first pectoral finray in some. Lower jaw not projecting, with small teeth at symphysis; pre-maxillae with a single (outer) row of small teeth and a few small teeth on maxilla; maxilla blade long and slender (depth 3 or more times in length), upper edge with a ridge flared outward; blade of second supra-maxilla small and spatulate. Lower gillrakers 14 to 22. Scales small, 36 to 42 in lateral series. Resembles *Poecilothrissa*, which has fewer scales (27 to 34) and a more slender body (22 to 24% of standard length), and *Potamothrissa*, which has teeth at the sides of the lower jaw and almost no shaft to the second supra-maxilla. Other pellonulines have a deeper maxilla blade (e.g. *Pellonula*) or are less trenchantly keeled.

**Biology, Habitat and Distribution**: Freshwater, in West African rivers (Congo/Zaire system, also Ghana).

**Interest to Fisheries**: Enter artisanal fisheries, but catches small.

**Species**: Poll (1974:147-148) recognized 2 species in the Congo/Zaire system, but a Ghanaian species has now been found:

- *M. minuta* Poll, 1974, West Africa, freshwaters
- *M. royauxi* Boulenger, 1902, West Africa, freshwaters

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**Microthrissa minuta** Poll, 1974


**Synonyms**: None.

**FAO Names**: En - Dungu sprat.
**Diagnostic Features**: Body moderately deep (depth about 22 to 30% of standard length). Scutes strongly keeled, 1 or 2 before base of first pectoral finray, 11 or 12 + 8. Snout pointed. Lower jaw included in upper when mouth closed, with small teeth at symphysis; maxilla blade slender, more than 3 times as long as deep, upper edge with a ridge flared outward; second supra-maxilla small, shaft as long as blade, the latter spatulate. Lower gillrakers 19 to 21. Total anal finrays 18 to 21. Scales in lateral series 37 to 40. Resembles *M. royauxi*, which has fewer gillrakers but more anal finrays (14 to 16 and 23 to 27), and *Microthrissa* sp. A which lacks scutes before the pectoral fin base. Species of *Poecilothrissa* have larger scales (only 27 to 34 in lateral series) and are more slender (depth 20 to 24% of standard length); species of *Potamothrissa* have teeth at the sides of the lower jaw and almost no shaft to the second supra-maxilla.

**Geographical Distribution**: West African freshwaters (upper Zaire system in Dungu River and its tributary the Garamba River; also lower Zaire).

**Habitat and Biology**: Riverine. More data and specimens needed.

**Size**: To 3.5 cm standard length.

**Interest to Fisheries**: -

**Local Names**: -

**Literature**: Only Roberts & Stewart (1976) have mentioned the species since its original description in 1976 (see CLOFFA, 1984:46).

**Microthrissa royauxi** Boulenger, 1902


**FAO Names**: En - Royal sprat.
**Diagnostic Features**: Body rather deep (depth about 30 to 37% of standard length). Scutes strongly keeled, 1 or 2 before base of first pectoral finray, 13 or 14 + 6 or 7. Snout fairly pointed. Lower jaw not projecting, included in upper when mouth closed, with small teeth at symphysis; maxilla blade slender, more than 3 times as long as deep, upper edge with a ridge flared outward; second supra-maxilla small, shaft as long as or longer than blade, the latter spatulate. Lower gillrakers 14 to 16. Total anal finrays 23 to 27. Scales in lateral series 36 to 40. Resembles *M. minuta*, which has more gillrakers but fewer anal finrays (19 to 21 and 18 to 21), and *Microthrissa* Species A, which lacks scutes before the pectoral fin base. Species of *Poecilothrissa* and *Potamothrissa* are more slender, the latter also with teeth at the sides of the lower jaw and almost no shaft to the second supra-maxilla. *Pellonula vorax* has a deep maxilla blade (depth less than 3 times in length) and the second supra-maxilla paddle-shaped.

**Geographical Distribution**: West African freshwaters (most of Congo/Zaire system, including Oubangui River but apparently not in the Kasai and its tributaries).

**Habitat and Biology**: Riverine (see Gosse, 1963).

**Size**: To 8 cm standard length.

**Interest to Fisheries**: A small contribution to local riverine catches.

**Local Names**: -

**Literature**: Twenty-six references to the species in CLOFFA (1984:46-47).

**Synonyms**: None (but perhaps reported as *Pellonula* sp.).

**FAO Names**: En - Muffin sprat.
**Diagnostic Features**: Body moderately deep (depth 29 to 32% of standard length). Scutes moderately keeled before pelvic fin base, strongly keeled behind; no scutes before pectoral fin base, 9 or 10 + 8 or 9. Snout pointed. Lower jaw not projecting, included in upper when mouth closed, with small teeth at symphysis; maxilla slender, a little over 3 times as long as deep, upper edge with a sharp ridge slightly flared outward; second supra-maxilla small, shaft about as long as blade, the latter spatulate. Lower gillrakers 21 to 23. Total anal finrays 18 to 20. Scales in lateral series 35 to 37. Resembles *M. royauxi* and *M. minuta*, but no pre-pectoral scutes (also, only 14 to 16 gillrakers in *M. royauxi*). Species of *Pocciliothrissa* have larger scales (only 27 to 34 in lateral series) and are more slender (depth 20 to 24% of standard length); species of *Potamothrissa* have teeth at the sides of the lower jaw and almost no shaft to the second supra-maxilla. *Pellonula vorax* and *P. leonensis* have a deep maxilla blade (depth less than 3 times in length) and the second supra-maxilla paddle-shaped.

**Geographical Distribution**: West African freshwaters (only known from the Birrim River near Kade, Ghana).

**Habitat and Biology**: Riverine. More data needed.

**Size**: To 7.3 cm standard length.

**Interest to Fisheries**: Probably contributes a little to riverine catches.

**Local Names**: -

**Literature**:

**Remarks**: This represents a considerable extension in the range of *Microthrissa*, being the first record outside the Congo/Zaire system.

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**Potamothrissa Regan, 1917**


**Diagnostic Features**: Small pellonulines, reaching about 7 cm (usually about 5 cm). Belly with a moderate keel of scutes beginning behind the pectoral fin base, or a strong keel beginning before it. Lower jaw not prominent, not rising steeply within mouth, teeth at symphysis continued back on either side of jaw; pre-maxillae with a single row of moderate teeth; maxilla blade slender, toothless, its depth more than 3 times in its length, its upper edge with a distinct flange against which the lower edge of the antorbital curves outward; second supra-maxilla small, with a short or vestigial anterior shaft. Lower gillrakers 14 to 18. Pelvic finrays 7, its insertion slightly behind origin of dorsal fin. Scales small, 36 to 42 in lateral series. Differs from all other West African pellonulines in having a slender lower jaw with saw-like teeth reaching back on each side (similar but minute teeth occur in *Limnothrissa* miodon of Lake Tanganyika, but the lower jaw is normal, i.e. deep).

**Biology, Habitat and Distribution**: Freshwater, in West African rivers (Congo/Zaire system).

**Interest to Fisheries**: Little or none.

**Species**: In the review by Poll (1974), 3 fairly distinctive species were recognized:

- *P. acutirostris* (Boulenger, 1899), West African freshwaters
- *P. obtusirostris* (Boulenger, 1909), West African freshwaters

**Remarks**: The presence of teeth at the side of the lower jaw is highly unusual in clupeid fishes. Such teeth also occur in the southeast Asian freshwater genus *Clupeichthys* (but lower jaw deep). As noted above, similar but much smaller teeth occur in the African genus *Limnothrissa* (jaw deep).
Potamothrissa acutirostris (Boulenger, 1899)

Pellonula acutirostris Boulenger, 1899. Anns Mus.r.Congo Belge, 1:63, pls 35, fig. 7 (Coulilhatville = Mbandaka, Zaïre system).

Synonyms: Pellonula acutirostris: Boulenger, 1909:159, fig. 127 (Zaire, Oubangui); Potamothrissa acutirostris - Regan, 1917:203 (upper Zaïre River); Microthrissa acutirostris: Poll, 1948:21; Poll, 1974:148 (synopsis); CLOFFA, 1984:51 (complete synonymy, ref. to habitat).

FAO Names: En - Sharpnosed sawtooth pellonuline.

Diagnostic Features: Body slender (depth 19 to 27% of standard length). Pre-pelvic scutes fairly strongly keeled, beginning under or just before pectoral fin base, 11 to 13 + 10 to 12. Snout pointed. Lower jaw not projecting, included in upper when mouth closed, deepest at mid-point of jaw, with small saw-like teeth on either side; pre-maxillae with rather peg-like teeth, those near mid-line pointing forward; maxilla very slender, its blade over 3 times as long as deep, upper edge ridged (flared outward), lower edge without denticulations; second supra-maxilla very small, spatulate, its shaft about as long as its blade. Lower gillrakers 16 to 18. Differs from P. obtusirostris and P. whiteheadi in its pointed snout, also more gillrakers (cf. 14 to 16 and 14 to 17). Other pellonulines lack saw-like teeth at the sides of the lower jaw.

Geographical Distribution: West African freshwaters (most of Zaïre system up River from Brazzaville, including the Oubangui, Lualaba, Kasai and other tributaries).

Habitat and Biology: Rivers and lakes, apparently in both running and still water; the distribution of the species suggests that it tolerates a wide variety of water conditions.

Size: To 7 cm standard length.

Interest to Fisheries: Probably little or none.

Local Names:

**Potamothrissa obtusirostris** (Boulenger, 1909)


**Synonyms**: Pellonula tenuis Nichols & Griscom, 1917:675, fig. 3 (Stanleyville = Kisangani); Stolothrissa tembessensis Fowler, 1949:239, figs 5-8 (Oka, Zaire system); Potamothrissa obtusirostris - Regan, 1917:203, fig.2 (Boulenger's types); Poll, 1974:148, map 3 (synopsis); CLOFFA, 1984:51 (complete synonymy, refs to habitat, food).

**FAO Names**: En - Blunt-nosed sawtooth pellonuline.

**Diagnostic Features**: Body slender (18 to 27% of standard length). Pre-pelvic scutes not strongly keeled, beginning under or behind base of last pectoral finray, 7 to 10 + 10 to 12, belly rounded. Snout bluntly rounded. Lower jaw not projecting, exactly meeting tip of upper when mouth closed, deepest at mid-point of jaw, with small saw-like teeth on each side; pre-maxillae with small teeth pointing downward; maxilla very slender, its blade over 3 times as long as deep, upper edge ridged (flared outward), lower edge without denticulations; second supra-maxilla very small, spatulate, its shaft about as long as its blade. Lower gillrakers 14 to 16. Silver stripe on flank, narrower anteriorly. Differs from *P. whiteheadi* in having a distinct shaft to the second supra-maxilla and lacking dermal denticles on the snout, and from *P. acutirostris* in its blunt snout and fewer gillrakers (cf. 16 to 18). Other pellonulines lack saw-like teeth at the sides of the lower jaw.

**Geographical Distribution**: West African freshwaters (upper parts of Zaire system, i.e. northern and eastern tributaries).

**Habitat and Biology**: Rivers and streams, perhaps not in lakes; feeds on aquatic insects (e.g. chironomid larvae) also hydracarians (Matthes, 1964:21). More data needed.

**Size**: To about 6 cm standard length.

**Interest to Fisheries**: Probably little or none.

**Local Names**: ZAIRE: Isandja.

**Literature**: Twenty-six references to the species in CLOFFA (1984).
Potamothrissa whiteheadi Poll, 1974

Potamothrissa whiteheadi Poll, 1974, Bull Acad r Belg Cl Sci, (5)60:156, fig. 3, map 3 (Hombo River, eastern part of Zaire system).

**Synonyms**: Potamothrissa whiteheadi - CLOFFA, 1984:52.

**FAO Names**: En - Whitehead’s sawtooth pellonuline.

**Diagnostic Features**: Body slender (depth 22 to 25% of standard length). Pre-pelvic scutes not strongly keeled, beginning under or behind base of last pectoral finray, 8 to 10 + 7 to 9, belly rounded. Snout bluntly rounded. Lower jaw not projecting, exactly meeting tip of upper jaw when mouth closed, deepest at mid-point of jaw, with small saw-like teeth on each side; pre-maxillae with small teeth pointing downward; maxilla very slender, its blade over 3 times as long as deep, upper edge ridged (flared outward), lower edge without denticulations; second supra-maxilla minute, virtually without anterior shaft. Small dermal denticles on snout and border of mouth. Lower gillrakers 14 to 17. Silver stripe along flank, narrower anteriorly. Closely resembles *P. obtusirostris*, which lacks dermal denticles on the snout and has more post-pelvic scutes (10 to 12); *P. acutirostris* has a pointed snout and more gillrakers (16 to 18). Other pellonulines lack saw-like teeth at the sides of the lower jaw.

**Geographical Distribution**: West African freshwaters (Hombo River, affluent of Luhoho River, about 1°30'S 28°30'E, Zaire system).

**Habitat and Biology**: Riverine, but no other data.

**Size**: To 4.7 cm standard length.

**Interest to Fisheries**: Probably none.

**Local Names**: -

**Literature**: Apparently not mentioned since its description in 1974.