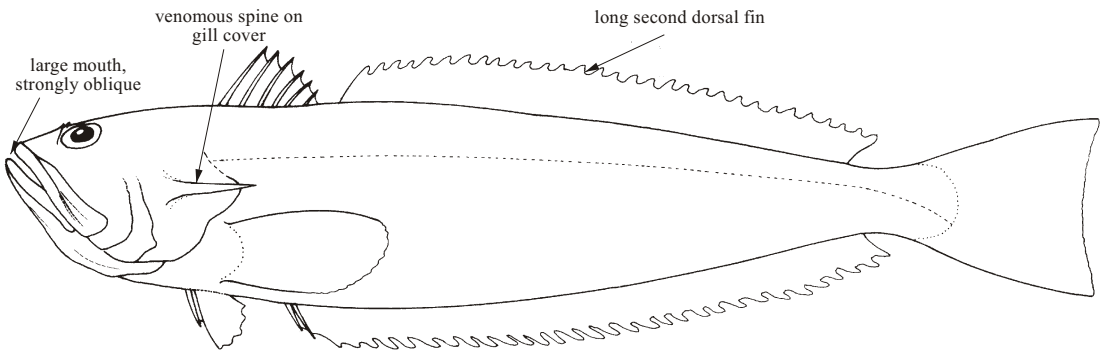


## TRACHINIDAE

### Weeverfishes

by W.L. Smith, The University of Kansas, Lawrence, KS, USA (after Roux, 1981, 1990)

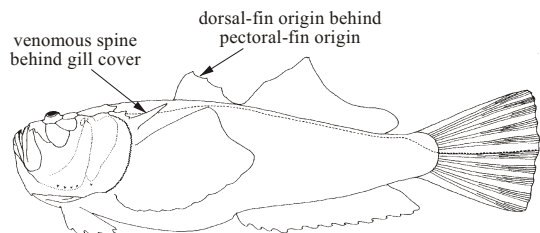
**Diagnostic characters:** Elongate, rather compressed, moderate-sized (to 45 cm total length) perciform fishes. **Eyes small (eye diameter contained 4 to 5 times in head length), approaching or protruding slightly above dorsal profile of head;** head small with a short snout; **mouth large, strongly oblique, extending to posterior margin of eye or just beyond when mouth is closed;** villiform teeth in jaws and on palate; vomerine teeth absent or present. **Dorsal fins separate, first fin short with 5 to 8 spines; second fin long with 0 spines and 21 to 32 segmented soft rays;** anal fin long with 1 or 2 spines and 24 to 34 segmented soft rays. Pectoral fins with 15 rays. Pelvic fins in advance of and smaller than pectoral fins. **Large, venomous spine on gill cover** and venomous dorsal spines. Vertebrae 34 to 43. Body covered with small, cycloid or ctenoid scales in oblique series; lateral line straight, occasionally ventrally displaced on caudal peduncle. Gas bladder absent. **Colour:** variable across species, ranging from off-white to greenish yellow to dark brown; most species have spots, oblique lines, or reticulations.



**Habitat, biology, and fisheries:** Littoral or benthic fishes inhabiting sandy or muddy bottoms on the continental shelf (occasionally collected deeper between 150 and 200 m). They are frequently encountered buried in the sediment with their eyes and venomous dorsal spines exposed. Envenomation can result in serious injuries or death, so exercise caution when handling fresh specimens. They feed primarily on small invertebrates and fishes. Reproduction often occurs during spring and summer (oviparous eggs and pelagic larvae). Weeverfishes are typically taken in trawls and with various forms of artisanal gear (e.g. traps, tines, beach seines). They are not of great commercial importance, but they are consumed in many localities and marketed fresh.

#### Similar families occurring in the area

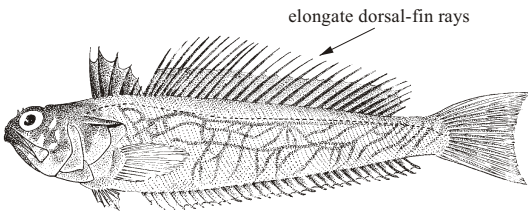
**Uranoscopidae:** large, dorsally flattened head (smaller, rounder head in Trachinidae); strong venomous spine behind gill cover; dorsal-fin origin behind pectoral origin; vertebrae 24 to 26.



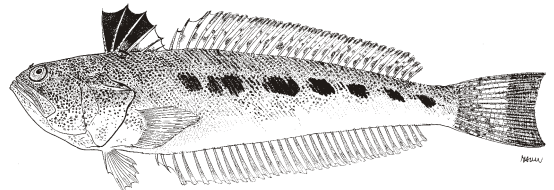
**Uranoscopidae**

**Key to the species of Trachinidae occurring in the area**

- 1a. Segmented dorsal-fin rays extending beyond dorsal-fin membrane and approximately twice the length of segmented anal-fin rays (Fig. 1) . . . . . → 2
- 1b. Segmented dorsal-fin rays approximately equal in length when compared to segmented anal-fin rays and not extending significantly beyond dorsal-fin membrane (Fig. 2) . . . . . → 3



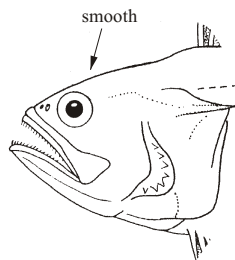
**Fig. 1** *Trachinus collignoni*



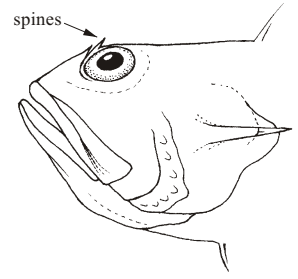
**Fig. 2** *Trachinus araneus*

- 2a. Seventy-five or more scales in lateral-line along body; body with spots on sides (often forming speckled bands), but never forming an irregular network . . . . . ***Trachinus pellegrini***
- 2b. Seventy-four or fewer scales in lateral-line along body; body with dark lines forming an irregular network on body (Fig. 1) . . . . . ***Trachinus collignoni***
- 3a. Eleven or more gill rakers on lower limb of first gill arch . . . . . → 4
- 3b. Six to 10 gill rakers on lower limb of first gill arch . . . . . → 6

- 4a. No spines on anterodorsal margin of orbit (Fig. 3), 13 or fewer (usually 12) gill rakers on lower limb of first gill arch . . . . . ***Echiichthys vipera***
- 4b. Two spines on anterodorsal margin of orbit (Fig. 4); 14 or more gill rakers on lower limb of first gill arch . . . . . → 5

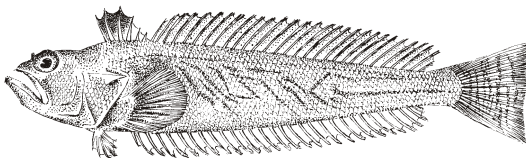


**Fig. 3** *Echiichthys vipera*

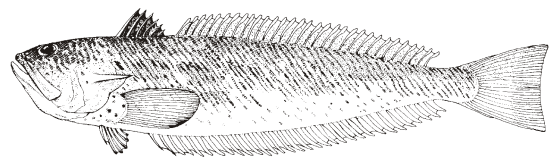


**Fig. 4** *Trachinus draco*

- 5a. Blue or black blotch (at least the diameter of the eye) above and behind pectoral fin; blue or dark-grey lines on body, wavy anteriorly, nearly horizontal in posterior third of body (Fig. 5), usually 14 gill rakers on lower limb of first gill arch . . . . . ***Trachinus armatus***
- 5b. No large blotch above and behind pectoral fin; no dark lines directed downward and backward (Fig. 6), usually 15 gill rakers on lower limb of first gill arch . . . . . ***Trachinus draco***



**Fig. 5** *Trachinus armatus*



**Fig. 6** *Trachinus draco*

- 6a. Seven or fewer gill rakers on lower limb of first gill arch; rough bony crests on head posterior to eyes (Fig. 7) . . . . . ***Trachinus radiatus***
- 6b. Ten gill rakers on lower limb of first gill arch; no radiating bony crests on head . . . . . → 7
  
- 7a. Twelve to 14 nearly parallel oblique lines on body . . . . . ***Trachinus lineolatus***
- 7b. One to 3 longitudinal rows of spots, not lines, on body (Fig. 2). . . . . ***Trachinus araneus***

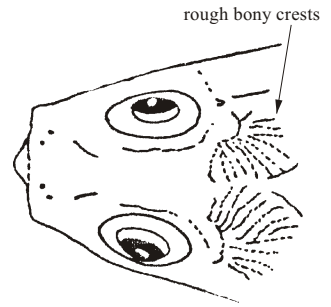











Fig. 7 *Trachinus radiatus*

**List of species occurring in the area**

The symbol  is given when species accounts are included.

-  *Echiichthys vipera* (Cuvier, 1829).
-  *Trachinus araneus* Cuvier, 1829.
-  *Trachinus armatus* Bleeker, 1861.
-  *Trachinus collignoni* Roux, 1957.
-  *Trachinus draco* Linnaeus, 1758 .
-  *Trachinus lineolatus* Fischer, 1885.
-  *Trachinus pellegrini* Cadenat, 1937.
-  *Trachinus radiatus* Cuvier, 1829.

**References**

**Bentivegna, F. & Fiorito, G.** 1983. Numerical taxonomic techniques confirm the validity of two genera in Trachinidae. *Cybium*, (Ser. 3)7: 51–56.

**Roux, C.** 1981. Trachinidae. In W. Fischer, G. Bianchi & W.B. Scott, eds. *FAO species identification sheets for fishery purposes. Eastern Central Atlantic; fishing areas 34, 47 (in part)*, volume IV. Rome, Department of Fisheries and Oceans Canada and FAO, 1–19.

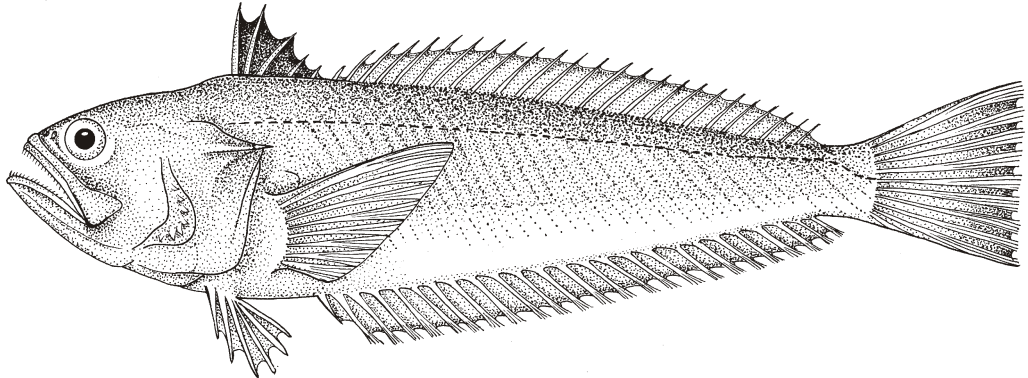
**Roux, C.** 1990. Trachinidae. In J.-C. Quéro, J.-C. Hureau, C. Karrer, A. Post & L. Saldanha, eds. *Check-list of the fishes of the eastern tropical Atlantic*. Paris, UNESCO, pp. 893–895.

**Tortonese, E.** 1986. Trachinidae. In P.J.P. Whitehead, M.-L. Bauchot, J.-C. Hureau, J. Nielsen & E. Tortonese, eds. *Fishes of the northeastern Atlantic and the Mediterranean*, volume II. Paris, UNESCO, pp. 951–954.

***Echiichthys vipera* (Cuvier, 1829)**

**Frequent synonyms / misidentifications:** *Trachinus vipera* Cuvier, 1829; *T. horridus* Gronow, 1854 / None.

**FAO names:** **En** – Lesser weever; **Fr** – Petite vive; **Sp** – Salvariego.



**Diagnostic characters:** Body elongate and compressed, its depth greater than one-fifth of total length. Eyes small (eye diameter contained 4 to 5 times in head length); mouth large, strongly oblique, the maxilla extending just beyond posterior margin of orbit when mouth is closed; villiform depressible teeth arranged in bands in both jaws; vomerine and palatine teeth present. Twelve or 13 gill rakers on lower limb of first gill arch. Two dorsal fins, the first fin short, with 5 to 8 spines, the second fin long, with 21 to 24 segmented soft rays; anal fin with 1 spine and **24 to 26 segmented soft rays**. Scales small, approximately 60 in lateral line, absent on cheek. Strong venomous spine on opercle. **Anterodorsal spines on head in adults lacking.** **Colour:** yellowish or brownish above, white below, **numerous small darker spots following the scale rows**. First dorsal fin almost entirely black; caudal fin edged with black.

**Size:** Maximum 15 cm; common to 10 cm.

**Habitat, biology, and fisheries:** Inhabits sandy bottoms in littoral and shallow coastal waters, often burrowing in the substrate, moving into somewhat greater depths during winter. The dorsal-fin spines and the spine on the gill cover are venomous. Feeds mainly on small invertebrates (crustaceans) and small fishes. Frequently found in markets, but not of great commercial importance. Separate statistics are not reported for this species. Caught mainly with bottom trawls and various types of artisanal gear (e.g. traps, lines, beach seines).

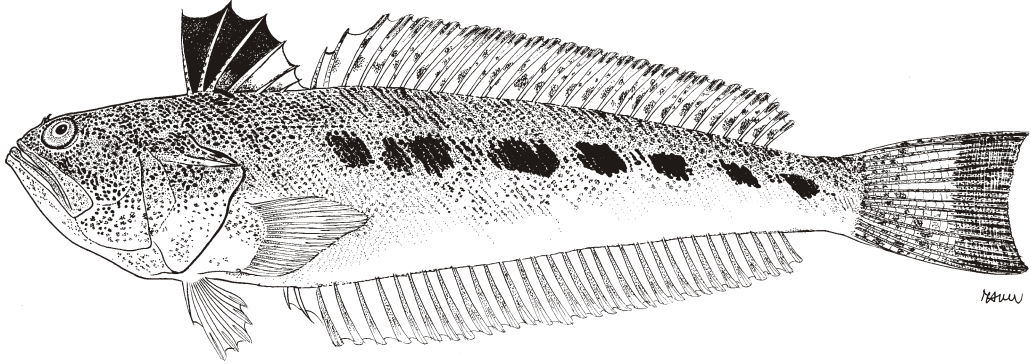
**Distribution:** Within the area, apparently restricted to the coast of Morocco, the Canary Islands, and Madeira. Northward extending into the Mediterranean and along the Atlantic coast of Europe up to Norway.



***Trachinus araneus* Cuvier, 1829**

**Frequent synonyms / misidentifications:** None / *Trachinus radiatus*.

**FAO names:** En – Spotted weever; Fr – Vive araignée; Sp – Araña.

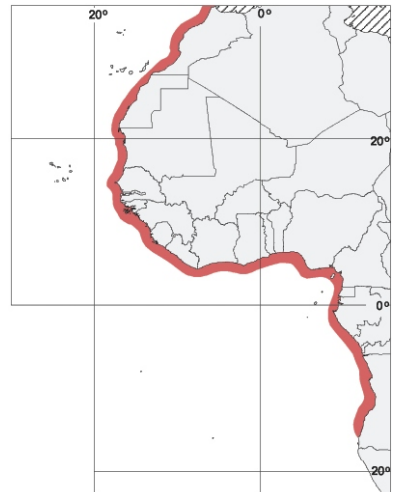


**Diagnostic characters:** Body elongate and compressed, its depth contained approximately 4.3 times in standard length. Eyes small (eye diameter contained 4 to 5 times in head length), near dorsal profile of head; **width of interorbital space about equal to eye diameter**; snout short (4.3 to 5.5 times in postorbital length); mouth large, oblique, and not protrusible, the maxilla extending slightly beyond posterior margin of orbit when mouth is closed; villiform depressible teeth in both jaws; vomerine and palatine teeth present. **Ten gill rakers on lower limb of first gill arch.** Two dorsal fins, the first short, with 6 or 7 spines, the second long, with 26 to 29 segmented soft rays; anal fin with 2 spines and 29 to 31 segmented soft rays nearly equal in length to dorsal soft rays. Scales small, 79 or 80 in lateral line, cheek scaled. A strong venomous spine on opercle; spines also present in preorbital region and on preopercle. **Colour:** back and sides light yellowish grey, **usually with 1 to 3 longitudinal rows of more or less rounded to quadrangular dark spots.**

**Size:** Maximum 45 cm; common to 25 cm.

**Habitat, biology, and fisheries:** Inhabits shallow waters from the coastline to about 100 m depth, burrowing in the sand. The first dorsal-fin spines and the spine on the gill cover are venomous. Feeds mainly on small invertebrates (crustaceans) and small fishes. Taken incidentally throughout its range, but apparently not abundant. Separate statistics are not reported for this species. Caught with bottom trawls and various types of artisanal gear (e.g. traps, lines) and marketed fresh.

**Distribution:** Within the area, from Morocco to southern Angola; northward extending into the Mediterranean and along the Atlantic coast of Europe to southern Portugal.

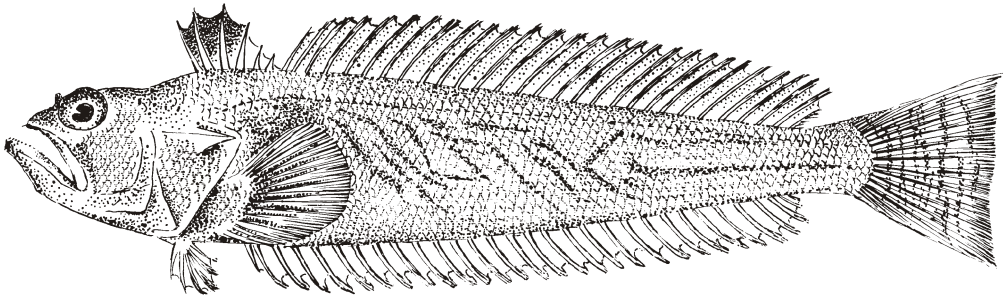




<i>Trachinus armatus</i> Bleeker, 1861
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**Frequent synonyms / misidentifications:** None / None.

**FAO names:** **En** – Guinean weever; **Fr** – Vive guinéenne; **Sp** – Araña de Guinea.

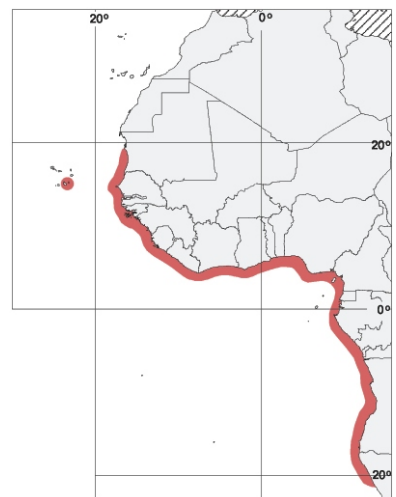


**Diagnostic characters:** Body elongate and compressed, its depth contained 4.4 to 4.7 times in standard length. Eyes of moderate size (eye diameter contained 3.7 to 4.2 times in head length), near dorsal profile of head; snout very short (3.0 to 3.4 times in postorbital length); mouth large, oblique, and not protrusible, the maxilla extending just beyond posterior margin of orbit when mouth is closed; villiform, depressible teeth in both jaws; vomerine and palatine teeth present. **Usually 14 gill rakers on lower limb of first gill arch.** Two dorsal fins, the first short, with 6 spines, the second long, with 29 or 30 segmented soft rays; anal fin with 2 spines and 29 or 30 segmented soft rays, nearly equal in length to dorsal soft rays. Scales small, 75 to 77 in lateral line, cheek scaled. A strong venomous spine on opercle; spines also present in preorbital region, snout, and on preopercle. **Colour:** light brown, somewhat darker on back; **body with a characteristic blue or black blotch (as large or larger than eye diameter) above and behind pectoral fin and dark oblique lines, wavy in front, and horizontal posteriorly;** dorsal fin mostly dark grey or black.

**Size:** Maximum 35 cm; common to 25 cm.

**Habitat, biology, and fisheries:** Inhabits shallow waters in seagrass beds or burrowing in sand or mud from about 15 to 150 m; usually found in less than 50 m. The first dorsal-fin spines and the spine on the gill cover are venomous. Feeds chiefly on small invertebrates (crustaceans) and small fishes. Taken by trawl and artisanal fisheries throughout its range, but it is apparently not abundant. Separate statistics are not reported for this species. Caught with bottom trawls and various types of artisanal gear (e.g. trammel nets, lines, traps) and marketed fresh.

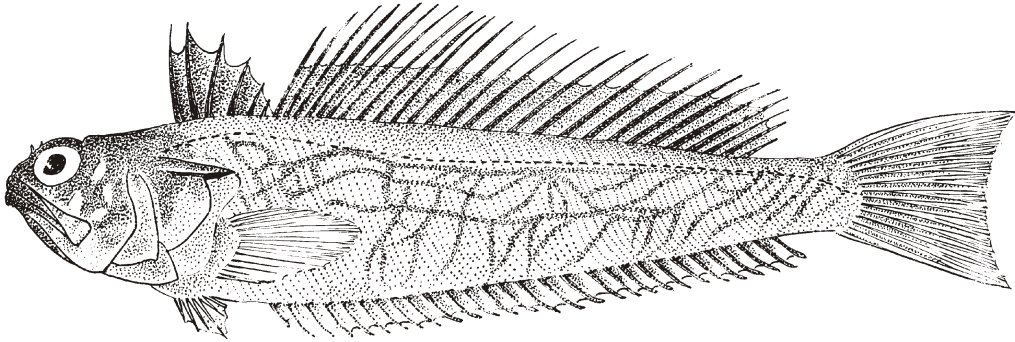
**Distribution:** From Mauritania to Namibia and the Cape Verde Islands.



*Trachinus collignoni* Roux, 1957

**Frequent synonyms / misidentifications:** None / None.

**FAO names:** En – Sailfin weever; Fr – Vive peigne; Sp – Araña aletona.



**Diagnostic characters:** Body elongate and strongly compressed. Eyes of moderate size (eye diameter contained about 4 times in head length), near dorsal profile of head; mouth large, oblique, and not protrusible; snout short; villiform, depressible teeth arranged in bands in both jaws; vomerine and palatine teeth present. Thirteen gill rakers on lower limb of first gill arch. Two dorsal fins, the first short, with 6 spines, the second long, with 27 long, segmented soft rays; rays extending beyond dorsal-fin membrane and approximately twice the length of anal-fin rays; anal fin **with 27 to 29 segmented soft rays**. Scales small, 73 in lateral line. Strong venomous spine on opercle; spines present in preorbital region. **Colour:** light brown with an irregular network of dark lines on sides; no black spot on first dorsal fin.

**Size:** Maximum to at least 20 cm; common to 15 cm.

**Habitat, biology, and fisheries:** Inhabits littoral and shallow coastal waters on soft bottoms. The first dorsal-fin spines and the spine on the gill cover are venomous. Taken by trawl, but apparently not abundant. Separate statistics are not reported for this species.

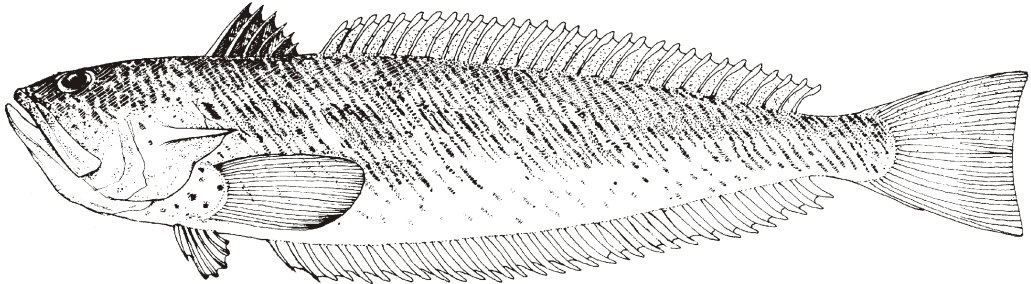
**Distribution:** Known from Senegal to central Angola and the Cape Verde Islands.



***Trachinus draco*** Linnaeus, 1758

**Frequent synonyms / misidentifications:** *Trachinus lineatus* Bloch and Schneider, 1801 / None.

**FAO names:** **En** – Greater weever; **Fr** – Grande vive; **Sp** – Escorpión.



**Diagnostic characters:** Body elongate and compressed, **its depth less than one-fifth of total length**. Eyes small, near dorsal profile of head; **width of interorbital space about equal to eye diameter**; mouth large, oblique, and not protrusible, the maxilla extending beyond posterior margin of orbit when mouth is closed; villiform, depressible teeth arranged in bands in both jaws; vomerine and palatine teeth present; usually 15 gill rakers on lower limb of first gill arch. Two dorsal fins, the first short, with 5 to 7 spines, the second long, with 29 to 32 segmented soft rays; **anal fin with 2 spines and 27 to 34 segmented soft rays** about equal in length to dorsal soft rays. Scales small, 80 to 83 in lateral line, cheek scaled. Strong venomous spine on opercle; anterodorsal spines on heads present. **Colour: dorsally green with brown or green scales arranged in oblique rows forming numerous dark lines directed downward and backward**; lateral and ventral surfaces light yellow.

**Size:** Maximum 45 cm; common to 25 cm.

**Habitat, biology, and fisheries:** Inhabits muddy bottoms, often burrowing in the substrate, from the coastline to about 200 m depth; most common between 20 and 50 m, but migrating into deeper waters (to 100 m) during winter. The first dorsal-fin spines and the spine on the gill cover are venomous. Feeds chiefly on small invertebrates (crustaceans) and small fishes. Regularly found in local markets in Morocco, Canary Islands, and Madeira. Separate statistics are not reported for this species. Caught mainly with bottom trawls and artisanal gear (e.g. traps, lines) and marketed fresh.

**Distribution:** Within the area, known from Morocco to Mauritania, the Canary Islands, and Madeira. Northward extending into the Mediterranean and Black Seas up the Atlantic coast to Norway.

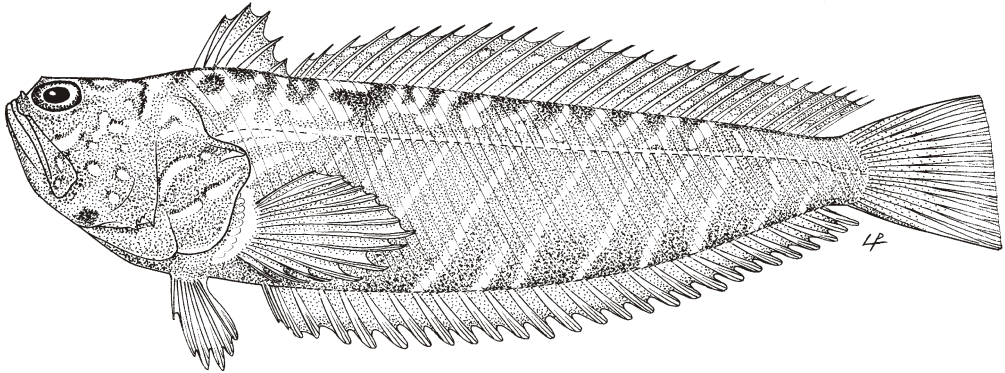




*Trachinus lineolatus* Fischer, 1885

**Frequent synonyms / misidentifications:** None / None.

**FAO names:** **En** – Striped weever; **Fr** – Vive rayée; **Sp** – Escorpión rayado.



**Diagnostic characters:** Body elongate and compressed, its depth contained 3.7 to 3.8 times in standard length. Eyes small, (eye diameter contained 4.9 to 5.0 times in head length), near dorsal profile of head; mouth large, oblique, and not protrusible; villiform teeth in jaws as well as on palate. **Ten gill rakers on lower limb of first gill arch.** Two dorsal fins, the first short, with 6 spines, **the second long, with 26 segmented soft rays**; anal fin with 2 spines and 27 or 28 segmented soft rays, about equal in length to dorsal soft rays. Strong venomous spine on opercle; single spines present in preorbital region and on snout. Scales small, 61 or 62 in lateral line. **Colour: light brown, with 12 to 14 yellow or orange oblique lines running forward and downward on body**; interradial membrane between first 3 spines of dorsal fin black.

**Size:** Maximum 15 cm; common to 10 cm.

**Habitat, biology, and fisheries:** Inhabits soft bottoms in littoral areas and shallow coastal waters. The first dorsal-fin spines and the spine on the gill cover are venomous. Taken by trawl, but apparently not abundant. Separate statistics are not reported for this species.

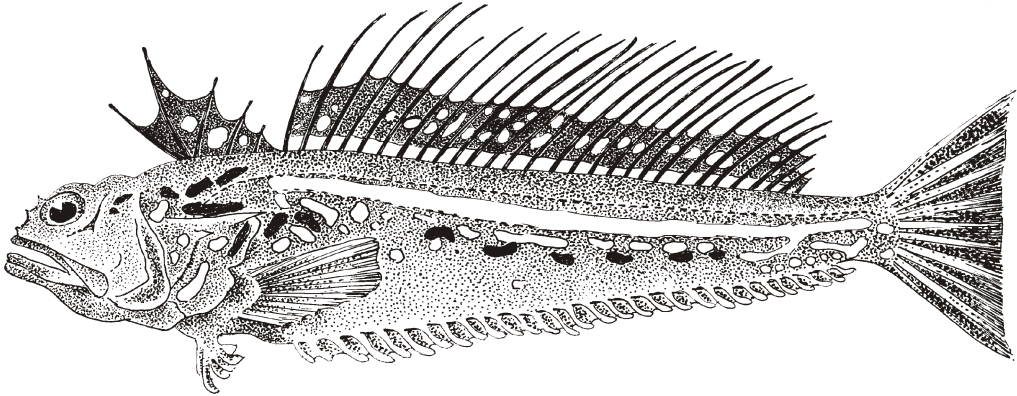
**Distribution:** Tropical coast of West Africa recorded from Guinea, Sierra Leone, São Tomé, and Gabon.



***Trachinus pellegrini* Cadenat, 1937**

**Frequent synonyms / misidentifications:** None / None.

**FAO names:** **En** – Cape Verde weever; **Fr** – Vive du Cap Vert; **Sp** – Araña de Cabo Verde.



**Diagnostic characters:** Body elongate and strongly compressed. Eyes of moderate size (eye diameter contained 3.4 to 3.7 times in head length), near dorsal profile of head; snout short (about 5 times in postorbital length); mouth large, oblique, and not protrusible; villiform, depressible teeth arranged in bands in both jaws; vomerine and palatine teeth present. Twelve gill rakers and 2 tubercles on lower limb of first gill arch. Two dorsal fins, the first short, with 6 spines, **the second long, with 27 or 28 long, segmented soft rays; rays extending beyond dorsal-fin membrane and approximately twice the length of segmented anal-fin rays;** anal fin with 29 or 30 segmented soft rays. Scales small, 82 in lateral line. Upper margin of opercle with a strong crest ending in a venomous spine; spines are present in preorbital region along with a blunt point at angle of preopercle. **Colour:** dorsal surface blue or grey anteriorly, becoming darker posteriorly; sides violet, **yellow band running from opercular spine backward to caudal fin parallel to lateral line; a series of yellow spots and blotches below the yellow band, forming an irregular line;** brown spots on head and below the yellow band. First and second dorsal fins bluish grey with yellow round spots on membrane, but no black spot on first dorsal; caudal fin violet.

**Size:** Maximum 20 cm; common to 15 cm.

**Habitat, biology, and fisheries:** Inhabits rock and sand bottoms in littoral areas and coastal waters to 150 m depth. The first dorsal-fin spines and the spine on the gill cover are venomous. Feeds chiefly on small invertebrates (crustaceans) and occasionally small fishes. Taken occasionally by trawl and artisanal fisheries, but reported to be common in certain areas. Separate statistics are not reported for this species. Caught with bottom trawls and marketed fresh.

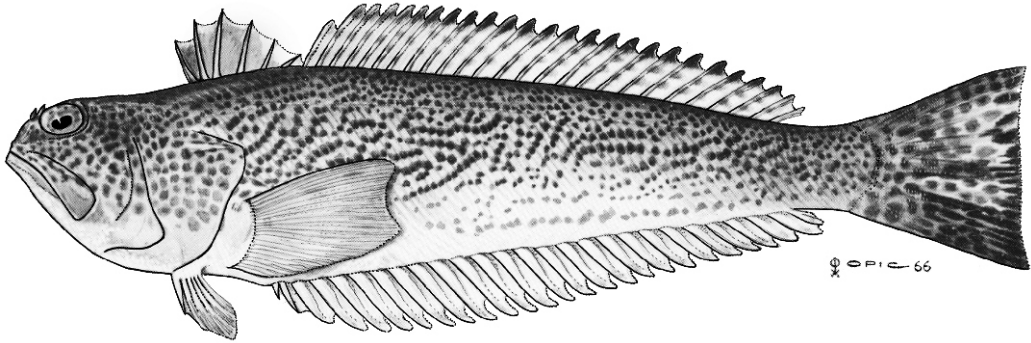
**Distribution:** Canary and Cape Verde Islands as well as tropical coast of West Africa, from Senegal to Cameroon.



***Trachinus radiatus* Cuvier, 1829**

**Frequent synonyms / misidentifications:** *Pseudotrachinus pardalis* Bleeker, 1861; *Trachinus vainus* Rafinesque, 1810 / *Trachinus araneus*.

**FAO names:** **En** – Starry weever; **Fr** – Vive à tête rayonnée; **Sp** – Víbora.



**Diagnostic characters:** Body elongate and compressed throughout its length, its depth contained about 4 times in standard length. Eyes small (eye diameter contained 5 times in head length); width of interorbital space about half the eye diameter; mouth large, strongly oblique, and not protrusible, the maxilla extending beyond posterior margin of orbit, when mouth is closed; snout short, about 3 times in postorbital length; villiform depressible teeth arranged in bands in both jaws; vomerine and palatine teeth present. **Six or 7 gill rakers on lower limb of first gill arch.** Two dorsal fins, the first short, with 6 or 7 spines, the second long, with 24 to 29 (usually 25) segmented soft rays; anal fin with 2 spines and 25 to 29 segmented soft rays about equal in length to dorsal soft rays. Scales small, 69 in lateral line (excluding those on caudal-fin base), cheek scaled. Strong venomous spine on opercle; spines present in preorbital region; **preopercular spine absent.** **Five groups of pronounced radiating bony crests present on top of head behind eyes.** **Colour:** a whitish background including numerous brown spots and vermiculations on head and body; first dorsal fin mostly black; soft dorsal and anal fins with grey spots.

**Size:** Maximum 45 cm; common to 25 cm.

**Habitat, biology, and fisheries:** Inhabits sand and mud bottoms of the continental shelf between the coastline and 150 m depth, burying in the substrate. The first dorsal-fin spines and the spine on the gill cover are venomous. Feeds chiefly on small invertebrates (crustaceans) and small fishes. Taken by trawl and artisanal fisheries throughout its range. Separate statistics are not reported for this species. Caught chiefly with bottom trawls and marketed fresh.

**Distribution:** Within the area, from Gibraltar southward to Angola. Northward extending into the Mediterranean and along the Atlantic coast to Portugal.

