**Geographical Distribution**: Western North Atlantic: Southern New England to Gulf of Mexico, Jamaica, Venezuela.

**Habitat and Biology**: A moderately common but rather poorly known temperate and subtropical angelshark of the Western North Atlantic continental shelf and slope, on or near the bottom from close inshore to exceptionally down to 1390 m depth. It apparently is seasonal in its presence in shallow water, and off the eastern United States apparently moves inshore in the spring and summer, and subsequently disappears, apparently into deeper water. Ovoviviparous. Eats small bottom fishes, crustaceans and bivalves. Not dangerous to people when undisturbed, but readily snaps at fishermen that catch it (hence the common name sand devil) and can inflict severe lacerations.

**Size**: Maximum total length about 152 cm, mature males from 92 to 107 cm.

**Interest to Fisheries**: Apparently not utilized by fisheries.

**Literature**: Bigelow & Schroeder (1948); Compagno & Vergara (1978).

---

**Squatina formosa** Shen & Ting, 1972

*Synonymy*: None.

*FAO Names*: En - Taiwan angelshark; Fr - Ange de mer moinillon; Sp - Angelote de Taiwan.

**Diagnostic Features**: Trunk moderately narrow. Anterior nasal barbels apparently simple and with a narrow, tapering tip; posterior margin of anterior nasal flaps between nasal barbels and tips weakly fringed or smooth; distance from eye to spiracle less than 1.5 times eye diameter; dermal folds on sides of head possibly with a triangular lobe. Pectoral fins rather broad and high, with narrowly subangular free rear tips. Spines on midline of back and tail, and on snout and between eyes small. Colour: no ocelli on body.
Geographical Distribution: Western North Pacific: Northeastern and southwestern coasts of Taiwan Island.

Habitat and Biology: A little-known angelshark of the outer continental shelf of Taiwan Island, caught on bottom at 183 to 220 m depth.

Size: Maximum total length reported 46 cm female, presumably immature.

Interest to Fisheries: None.

Literature: Shen & Ting (1972).

Remarks: The validity of this species is uncertain: it needs to be critically compared with other western North Pacific angel sharks. It is not included in the key, and field marks are not given.

Squatina japonica Bleeker, 1858


Synonymy: None.

FAO Names: En - Japanese angelshark; Fr - Ange de mer Kasuzame; Sp - Angelote japonés.

Field Marks: An angelshark with simple, spatulate nasal barbels and weakly fringed or smooth anterior nasal flaps, dermal flaps on sides of head without angular lobes, large eyes with interspace between them and spiracles less than 1.5 times eye diameter, fairly broad and posteriorly rounded pectoral fins, and no ocelli on body.

Diagnostic Features: Trunk moderately narrow. Anterior nasal barbels simple and with a narrow, spatulate tip; posterior margin of anterior nasal flaps between nasal barbels and tips weakly fringed or smooth; distance from eye to spiracle less than 1.5 times eye diameter; dermal folds on sides of head without triangular lobes. Pectoral fins rather broad and high, with rounded free rear tips. Moderately large spines present on midline of back and tail from head to dorsal fins and between the fin bases, and on snout and above eyes. Colour: no ocelli on body.
**Geographical Distribution**: Western North Pacific: Southeastern Sea of Japan to Yellow Sea, Japan, the Koreas, northern China, Philippines.

**Habitat and Biology**: A little-known angelshark of temperate western North Pacific waters, found on or near the bottom.

**Size**: Maximum total length to 2 m long.

**Interest to Fisheries**: Details of fisheries off China, Japan and the Republic of Korea sketchy but apparently taken in large numbers off China, and used for human consumption and for preparation of shagreen for polishing and finishing woodworks.

**Literature**: Fowler (1941); Bigelow & Schroeder (1948).

---

*Squatina nebulosa* Regan, 1906


**Synonymy**: None.

**FAO Names**: En - Clouded angelshark; Fr - Ange de mer nébuleux; Sp - Angelote nebuloso.

---

**Field Marks**: An angelshark with simple, tapering nasal barbels and weakly fringed or smooth anterior nasal flaps, dermal flaps on sides of head with two angular lobes, large eyes with interspace between them and spiracles less than 1.5 times eye diameter, fairly broad and posteriorly rounded pectoral fins, and no ocelli on body.

**Diagnostic Features**: Trunk fairly broad. Anterior nasal barbels simple and with a narrow, tapering tip; posterior margin of anterior nasal flaps between nasal barbels and tips weakly fringed or smooth; distance from eye to spiracle less than 1.5 times eye diameter; dermal folds on sides of head with two triangular lobes. First dorsal origin about opposite rear tips of pelvics. Pectoral fins rather broad and high, with broadly rounded free rear tips. Small spines present on midline of back and tail from head to dorsal fins and between the fin bases, and on snout and above eyes. Colour: no ocelli on body.
Geographical Distribution: Western North Pacific: Southeastern Sea of Japan to Taiwan Island, including Japan, the Koreas, China.

Habitat and Biology: A little-known temperate water angel shark of the western Pacific continental shelves, found on or near the bottom.

Size: Maximum total length in females at least 163 cm.

Interest to Fisheries: Taken off China, but details of fishery unknown; probably taken elsewhere in its range.

Literature: Fowler (1941); Bigelow & Schroeder (1948).

*Squatina oculata* Bonaparte, 1840


Synonymy: None.

FAO Names: En - Smoothback angelshark; Fr - Ange de mer ocellé (= Ange de mer de Bonaparte); Sp - Pez ángel.

Field Marks: An angelshark with large thorns on snout and above eyes but not do midback, weakly bifurcated nasal barbels and weakly fringed anterior nasal flaps; the first dorsal origin usually well behind the pelvic rear tips, and prominent white spots on body.

Diagnostic Features: Trunk rather slender. Anterior nasal barbels weakly bifurcated; posterior margin of anterior nasal flaps between nasal barbels and tips weakly fringed; distance from eye to spiracle less than 1.5 times eye diameter; dermal folds on sides of head without triangular lobes. Origin of first dorsal fin usually well behind free rear tips of pectoral fins; pectoral fins low and angular, rear tips of pectoral fins broadly subangular. Large spines present on snout and above eyes but usually absent from midback; lateral trunk denticles pointed and with three ridges. Colour: no large brown ocelli, but prominent white spots present in a symmetrical pattern on pectoral fins and on body.
Geographical Distribution: Eastern Atlantic: Mediterranean and Morocco to Angola.

Habitat and Biology: A warm-temperate and tropical angelshark of the eastern Atlantic continental shelves and upper slopes from 20 to 500 or more metres, mostly between 50 and 100 m, deeper in tropics. Ooviviparous. Eats small fishes, including goatfishes.

Size: Maximum total length 160 cm, adult males to at least 140 cm, size at birth about 24 to 27 cm.

Interest to Fisheries: Caught primarily in bottom trawls, but also in fixed bottom nets, on line gear, and occasionally even in pelagic trawls. Utilized fresh and dried salted for human consumption, for liver oil and hides used for leather.

Literature: Bigelow & Schroeder (1948); Poll (1950); Cadenat (1957); Maurin & Bonnet (1970); Compagno (1981).

**Squatina squatina** (Linnaeus, 1758)


Synonymy: *Squatina vulgaris* Risso, 1810; *Squatina angelus* Blainville, 1816; *Squatina laevis* Cuvier, 1817; *Squatina lewis* Couch, 1825; ? *Squalraia acephala* de la Pylaie, 1835; ? *Squalraia cervicata* de la Pylaie, 1835; *Squatina europaea* Swainson, 1839.

FAO Names: En - Angelshark; Fr - Ange de men common; Sp - Angelote.

Field Marks: An angelshark with a broad trunk, simple, conical nasal barbels and smooth or weakly fringed anterior nasal flaps, dermal flaps on sides of head with an angular lobe, very high broad pectoral fins, and no ocelli on body.
**Diagnostic Features:** Trunk very broad. Anterior nasal barbels simple and with a spatulate tip; posterior margin of anterior nasal flaps between nasal barbels and tips weakly fringed; distance from eye to spiracle over 1.5 times eye diameter; dermal folds on sides of head with a single triangular lobe. Pectoral fins very high and broad, with broadly rounded rear tips. Small spines present or absent on midline of back and tail from head to dorsal fins and between the fin bases, and patches of small spines on snout and above eyes; lateral trunk denticles with very narrow, sharp-cusped crowns. Colour: no ocelli on body.

**Geographical Distribution:** Eastern North Atlantic: Southern Norway, Sweden and Shetland Island to Morocco and West Sahara, Canary Islands, Mediterranean.

**Habitat and Biology:** A temperate-water bottom-dwelling angelshark of the European and North African continental shelves, on or near the bottom from close inshore to at least 150 m depth. This shark prefers mud or sandy bottom, where it lies buried with hardly more than its eyes protruding. It is nocturnal and can be found swimming strongly up off the bottom, but is torpid in the daytime and rests on the bottom. In the northern parts of its range the angelshark is seasonally migratory, and makes northward incursions during the summer.

This shark is ovoviviparous, with moderate-sized litters of 9 to 20 young. The angelshark feeds primarily on bony fishes, especially flatfishes but also other demersal fishes and skates, crustaceans and molluscs.

**Size:** Maximum total length at least 183 cm and possibly to 244 cm; adult males reaching 183 cm, females maturing at 126 to 167 cm; size at birth about 24 to 30 cm.

**Interest to Fisheries:** Caught in bottom trawls, and utilized fresh and dried salted for human consumption, and possibly for oil and fishmeal.

**Literature:** Garman (1913); Bigelow & Schroeder (1948); Wheeler (1978); Compagno (1981).

---

**Squatina tergocellata** McCulloch, 1914


**Synonymy:** None.

**FAO Names:** En - Ornate angelshark; Fr - Ange de mer bourgeois; Sp - Angelote ornamentado.
**Field Marks:** An angelshark with strongly fringed nasal barbels and anterior nasal flaps, dermal flaps on sides of head without angular lobes, large eyes with interspace between them and spiracles less than 1.5 times eye diameter, fairly broad and rounded pectoral fins, and prominent large ocelli on body.

**Diagnostic Features:** Trunk relatively narrow. Anterior nasal barbels and posterior margins of anterior nasal flaps strongly fringed; distance from eye to spiracle less than 1.5 times eye diameter; dermal folds on sides of head without triangular lobes. Origin of first dorsal fin about opposite inner margins of pelvic fins; pectoral fins moderately high and angular, with broadly rounded free rear tips. Small spines present on midline of back and tail from head to dorsal fins and between the fin bases; moderate-sized spines present on snout and above eyes. Colour: very large and prominent acelli present on body.

**Geographical Distribution:** Western South Pacific: Australia (New South Wales, Western and South Australia).

**Habitat and Biology:** A little-known, temperate water angel shark of the Australian continental shelf and upper slope, on or near the bottom at depths of 128 to 366 m.

**Size:** Maximum uncertain, largest reported 55 cm total length (probably immature).

**Interest to Fisheries:** None at present.

**Literature:** Whitley (1940); Bigelow & Schroeder (1948).

---

**Squatina tergocellatoides** Chen, 1963


**Synonymy:** None.
**FAO Names**: En - Ocellated angelshark, Fr - Ange de mer dandy; Sp - Angelote ocelado.

**Field Marks**: An angelshark with weakly fringed nasal barbels and anterior nasal flaps, and no ocelli on body.

**Diagnostic Features**: Anterior nasal barbels strongly fringed; posterior margin of anterior nasal flaps between nasal barbels and tips strongly fringed; distance from eye to spiracle less than 1.5 times eye diameter; dermal folds on sides of head with 2 or 3 prominent triangular lobes. Origin of first dorsal fin usually about opposite pelvic rear tips; pectoral fins rather long and low, free rear tips narrowly subangular. Large spines present on midline of back and tail from head to dorsal fins and between the fin bases, also on snout and above eyes; lateral trunk denticles pyramidal, not hooked. Colour: no ocelli on body.

**Geographical Distribution**: Western North Pacific: Taiwan Straits.

**Habitat and Biology**: A little-known angelshark from Taiwan Island waters, details of habitat and biology unknown.

**Size**: Maximum total length at least 63 cm (holotype and only known specimen).

**Interest to Fisheries**: None at present.

**Literature**: Chen (1963).