Family Squatinidae – Angel sharks

Class Chondrichthyes
Subclass: Elasmobranchii
Order: Squatiniformes
One Genera, Squatina
17 species* (two currently under review)
Fossil record: upper Jurassic

Descriptive Characters
- No Anal fin, 2 spineless dorsal fins
- Pelvic fins large
- Dorso-ventrally flattened body with dorsal eyes
- Wing-like pectorals front margins overlap gill slits, **but not attached to head**
- Terminal Mouth and nostrils, barbels on mouth ventral margin
- Five gill slits-run from side of head (lateral) to ventral surface, large dorsal spiracles
- Hypocercal caudal fin long lower lobe
- Maximum length 2.4m (**S. squatina**)

Distribution
- Found worldwide on continental shelf,
- Species distributed throughout subtropics
- Found from 0 – 500 m, some species (**S. tergocellata**) found bathydemersal
- Sand and mud bottoms

Reproduction
- Ovoviviparous, litters range from 3-11,
- For **S. oculata**:
  - Oocytes develop in Jan-Feb
  - Fetuses fully developed from March to June of the following year,
  - Pups are between 23.3-24.7 cm at birth
  - Male-Female sex ratio, both in litters and free living population 1:1

Feeding Biology/Behavior
- Ambush Predators
- Primarily utilize vision, not relying as heavily on electroreception
- Strike with cranial elevation (up to 90°) and pectoral thrust off bottom
- Strikes occur in 30 – 100 msec

Prey
- Other bottom associated fauna
- Teleosts
- Cephalopods
- Smaller sharks, eg. Horn shark
Species and IUCN Redlist Status

*Squatina aculeata* – Sawback angelshark, Status: Endangered IUCN redlist, protected only in Balearic Islands (Spain)

*Squatina africana* – African Angel shark, Status: Data Deficient, DD

*Squatina argentina* – Argentine Angel shark, status: DD

*Squatina armata* – *(possible synonym of S. californica)*, SE Pacific Chile, Ecuador; DD

*Squatina australis* – Australiasian Angel shark, Status: Least Concern, stable

*Squatina californica* – max reported age 35 yrs, commercially fished, E. Pacific from Alaska to southern Chile; Status DD, abundance decreased in late 80’s, protection from elimination of CAgillnet fishery helping

*Squatina dumeril* – Atlantic Angel shark, found from 0-1375m, Status: DD

*Squatina formosa* – Tiawan angel shark, little known, Status: Not Listed, NL

*Squatina guggenheim* – Angular angel shark 130cm, 24 – 360m, SW Atlantic So. Brazil and Argentina, Status: Endangered, no protection, fisheries continue

*Squatina japonica* – Japanese Angel shark, Status: NL

*Squatina nebulosa* – found NW Pacific: Japan, Tiawan, south China Sea, Status: NL

*Squatina occulta* – Hidden Angel Shark, SW Atlantic – Status: Endangered, Maturity at 10 yrs, fished on cont. shelf gillnet fishery losses up to 80%.

*Squatina oculata* – Smoothback angelshark, Status: Critically Endangered, fisheries expected to continue, uncommon throughout range, lost in some areas

*Squatina punctata* – Angular angelshark*(species being debated)*, southern Brazil/Argentina, Status: Endangered, downward trend continued fishing

*Squatina squatina* – northeast to eastern central Atlantic down to west Sahara, Mediterranean and Black Sea - Listed as Critically Endangered by IUCN Redlist due to low reproduction rate, bycatch in benthic trawls, set nets and bottom longlines, Declared extinct in the INorth Sea, and lost from some northern Med areas. Now uncommon throughout range, except in Canary Is.. First listed as vulnerable in 2000.

*Squatina tergocellata* – Ornate Angel shark 100cm, 128-400m (bathymersal), Found in Australia Status: Least Concern,

*Squatina tergocellatoide* – Ocellated Angel shark- 6 pairs of ocelli on fins only 2 specimens ever caught, details unknown, 63cm, Taiwan straits Not yet listed

Bibliography:


