

Placement of eggs in brood pouches

- In the sea horse and pipe fish male cares the eggs till hatching.
- In sea horse females transfer eggs into brood pouch of male. Male keep them till hatching & also carries the young for sometimes.
- The male pipe fish grows flaps of skin underside which form a pouch.



Male *Hippocampus* with brood pouch

13

Formation of mermaid's purses

- Sharks and rays forms mermaid's purses which are secreted by the shell glands of oviduct. They vary in shapes but perform same function i.e. protection.
- These are anchored to sea weeds by their long tendrils. Development occurs in them & young hatches out.



Fig. mermaid's purses of elasmobranchs

14

3) Viviparity in fishes

- Some fishes are viviparous such as *Scoliodon*, *Cymatogaster* etc. In them fertilization & development both are internal.



Fig. *Cymatogaster* giving birth to young

- 4) **Care of young ones:-** families such as Gasterosteidae, Ictaluridae & Centrarchidae does not stop with the caring of eggs but also defend their young ones.

15

Merits & demerits of parental care in fishes

- **Merits of parental care :-**
 - Improves survival of young ones
 - Improves development of young ones
- **Demerits of parental care:-**
 - Decreased parental survival
 - Increased time until the next breeding attempt
 - Reduced future fecundity

16

Conclusion

- Parental care is an inborn instinctive behavior shown by different species of fish. A number of fishes provide parental care to their eggs and young, provide protection for their survival against struggle for existence.
- Many fish species do not care for their eggs, but lay their eggs in sufficiently safer places in large number e.g. – some carps.
- Great diversity of parental care is found in fishes. Formation of basin shaped simple nest to viviparity and few take care of hatchlings.