

## *Poecilia sphenops* (Common Molly)

Family: Poeciliidae (Livebearers)

Order: Cyprinodontiformes (Tooth-carps)

Class: Actinopterygii (Ray-finned Fish)



**Fig. 1.** Common molly, *Poecilia sphenops*.

[[[http://www.wikipedia.com/Poecilia\\_sphenops\\_01.htm](http://www.wikipedia.com/Poecilia_sphenops_01.htm), downloaded 2 April 2015]

**TRAITS.** The wild variety of the common or short-finned molly (seen in Fig. 1) has dull silvery colouration, with dispersed black dots on its skin and a bright yellow fringe on the ends of its rounded dorsal and caudal fins. Individuals of this species exhibit wide ranges of colour variation that mainly incorporates silver, black and yellow-orange. The body is oblong with a round caudal peduncle and a small dorso-ventrally flattened head with protruding jaws that function as a scraping tool, ideal for rasping algae from benthic surfaces. Its mouth also possesses many rows of very small teeth, with the outer row being the largest and reducing in size with each successive row. *Poecilia sphenops* displays sexual dimorphism whereby males are smaller (8cm compared to 12cm of females) and more colourful, particularly males' larger caudal fins (Mills and Vevers, 1982). Males also have a gonopodium (modified fin) to transfer sperm during mating.

**DISTRIBUTION.** *Poecilia sphenops* populations span Central America from Colombia to Mexico (Fig. 2) with introduced populations dispersed around some Caribbean islands (Maciolek, 2005), including Trinidad and Tobago. As the species a very successful aquarium fish, it has also been introduced to Japan, Singapore and some regions of Europe.

**HABITAT AND ACTIVITY.** *Poecilia sphenops* inhabits mainly fresh water systems, in shallow areas, spending little time in coastal brackish waters (Wischnath, 1993) before returning to freshwater biotopes. This species is often artificially reared, so its optimum growth conditions are known: pH 7.0-8.5, hardness 15-30 dH, temperature 21-28°C, which influence the growth of the species (Seriously Fish, 2015). Anomalies have occurred, as it has been found living and breeding in coastal sea waters and brackish swamps. This is a reflection of the species' exceptional success as generalist; hardy and highly adaptable. They mostly occur in schools under floating vegetation or near structures in the water (Maciolek, 2005). Being a tolerant species these mollies are able to exploit the thin film of oxygen rich surface water with their mouths, and can survive in oxygen-depleted habitats.

**FOOD AND FEEDING.** Short-finned mollies are omnivores, feeding primarily on algae and other plant materials, but aquatic invertebrates including a variety of zoobenthos and detritivores such as mosquito larvae, contribute to its diet. They also feed on bloodworms. Though *Poecilia sphenops* occurs in groups, feeding occurs independently (Wischnath, 1993).

**REPRODUCTION.** Male *Poecilia sphenops* often raise dorsal fins to confront/challenge threatening rival males trying to impress/attract potential mates (Wischnath, 1993). As previously mentioned, *Poecilia sphenops* sexual dimorphism exists whereby females are usually larger than males, which is common in the Poeciliidae family. Males use the colourful dorsal and caudal fins as secondary sexual features to attract female mate (Seriously Fish, 2015). Female *Poecilia sphenops* have a dark patch that appears between the abdomen and the anal fin (gravid spot) (Fig. 3) which is present only when carrying young and forms as a result of dark tissue of the uterus pushing against the thin muscle wall of the abdomen (Seriously Fish, 2015). Fertilization occurs internally and is accomplished via highly modified anal fins of males called the gonopodium. *Poecilia sphenops* produce broods of 10-140 live young, the number of which produced depending on the maturity and size of the female (Seriously Fish, 2015). Gestation periods may vary between 3-4 weeks, depending upon temperature. In addition, females store sperm and can give birth on multiple occasions throughout the year (Wischnath, 1993). The young mollies stay in schools (groups) of similarly-sized fish (Fig. 4).

**APPLIED ECOLOGY.** The short-finned molly has many artificially selected varieties sold commercially. Naturally occurring populations of the short-finned molly may contribute to control mosquito populations by feeding on the larvae and pupae of these pests (Schoenherr, 1979). *Poecilia sphenops* have been transported all over the world and in some instances released into natural environments. Due to its generalist adaptation characteristics, this species thrive in its new environment and have resulted in adverse effects such as outcompeting natural organisms.

**REFERENCES**

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**Fig. 2.** *Poecilia sphenops* native geographic distribution.

[[http://www.viviparos.com/Galeria/Poecilia\\_sphenops\\_01.htm](http://www.viviparos.com/Galeria/Poecilia_sphenops_01.htm), downloaded 2 April 2015]



**Fig. 3.** Pregnant short-finned molly with swollen gravid spot, giving birth.

[<http://www.fishlore.com/fishforum/attachments/molly/molly-giving-birth-02.jpg>, downloaded 2 April, 2015]



**Fig. 4.** Young short-finned mollies.

[<http://www.molly-fish.com/>, downloaded 2 April 2015]