D-41 Food, feeding ecology and morphological features associated with feeding in two co-occurring freshwater fish species, *Etroplus maculatus* and *Puntius filamentosus*

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Etroplus maculatus (Bloch) (Family : Cichlidae) and *Puntius filamentosus* (Valeciennes) (Family : Cyprinidae), common indigenous fish of Sri Lanka, are popular aquarium fish. Their food, feeding habits and morphological features associated with feeding were studied in 134 Juvenile and adult *E.maculatus* (T.L. 3.8-8.9 cm) and 59 adult *P.*filamentosus (T.L. 7.4-12.6 cm) over a period of 4 months from July to October 1995. Both species were collected from Ranawa Wewa, a small dry zone tank, of surface area of 5.18 ha, mean depth of 3.04 m and volume of 62.95 x 10 m at full capacity, in the Mahaweli System H. Fish were caught using gill nets (mesh size 3.0 cm) and cast nets (mesh 1.5 cm).

Food of both species included macrophytes, detritus, filamentous algae, gastropod molluce *Thiara scabra,* insect parts and paddy grains. Plankton and sand grains were also found in the gut contents of *E. Maculatus* but were absent in the gut contents of *P..filamentosus*. Detritus, filamentous algae, macrophytes and gastropod molluscs were the main components of the food of *E. maculatus* comprising 34.3%, 25.0%, 11.6% and 10.7% in relative abundance, respectively. Macrophytes, gastropod molluscs, detritus and paddy grains were the main components of the food of *P. filamentosus,* comprising 30.2%, 27.2%, 16.5% and 12.0% in relative abundance, respectively. The gut contents of juvenile (T.L. 3.8-4.9 cm) and adult (T.L. 5.0-8.3 cm) *E. maculatus* differed. Detritus and filamentous algae were common to both groups but molluscan shells and paddy seeds were absent in the gut contents of juveniles while insects and sand grains were absent from the gut contents of adults. Analysis of gut contents suggests that both species are omnivores, feeding in the littoral area.

Morphological features related to feeding in *E. maculatus* included a terminal protrusible mouth, surrounded by jaws bearing small villiform teeth and pharyngeal plates having incisiform and molariform teeth with serrated, keratinized edges. *P. filamentosus* has a terminal mouth and relatively large pharyngeal teeth with smooth cutting edges. The alimentary canal of *E. maculatus* had a prominent sac-like stomach and a short coiled intestine while that of *P.filamentosus* was undifferentiated. The mean relative gut length of *E. maculatus* was 1.5 while that of *P. filamentosus* was 1.84.