

## GILLNET SELECTIVITY OF *PUNTIUS FILAMENTOSUS* AND *AMBLYPHARYNGODON MELETTINUS* IN THREE RESERVOIRS OF SRI LANKA

P.A.D. Ajith Kumara and U.S. Amarasinghe

Department of Zoology, University of Kelaniya, Kelaniya, Sri Lanka

Experimental fishing was carried out in three Sri Lankan reservoirs namely Minneriya, Udawalawe and Victoria using mono-filament gillnets of stretched mesh sizes ranging from 16mm to 37mm. Two indigenous cyprinid species, *Puntius filamentosus* (Jerdon) and *Amblypharyngodon melettinus* (Valenciennes) were caught in all three reservoirs. Gillnet selectivity of these two species was determined by Baranov-Holt method. The optimal lengths ( $L_{opt}$ ) in mm of the two species in the three reservoirs for different mesh sizes are as follows.

	<i>P. filamentosus</i>		<i>A. melettinus</i>	
	33mm	37mm	16mm	20mm
Minneriya	123.5	138.4	98.9	123.6
Udawalawe	118.9	133.8	80.0	100.0
Victoria	115.1	129.1	62.3	77.8

Estimated values of selection factors for *P. filamentosus* were 3.74, 3.49 and 10.69 in Minneriya, Victoria and Udawalawe reservoirs respectively while for *A. melettinus*, respective values were 6.18, 3.89 and 5.00.

In Minneriya and Udawalawe, wider range of *P. filamentosus* was caught when compared to selection range of same species in Victoria reservoir. For *A. melettinus*, the lowest selection range was found in Udawalawe and the highest was in Minneriya. The results suggest a significant difference in demographic parameters of these fish species between reservoirs. As such, detailed analysis of population dynamics of these unexploited fishery resources is necessary for determining optimal fishing strategies.

This study was carried out as part of the research project (Project Number: IC18-CT97-0190) funded by the European Union INCO-DC Programme.