

## EVALUATING THE STATUS OF AN INTER-BASIN TRANSLOCATION OF FOUR SPECIES OF ENDEMIC SRI LANKAN FISHES

H.M.J.C.B. Herath

Postgraduate Institute of Science (PGIS), University of Peradeniya, Peradeniya, Sri Lanka.

About 33 years ago (in 1981), four species of fish *Pethia cuningii*, *Pethia nigrofasciata*, *Puntius titteya* and *Rasborides vaterifloris*, which are endemic to streams of southwestern Sri Lanka were translocated into several streams around Nawalapitiya area in the Mahaweli River basin; Balantota ela, Ceypotha ela, Horakada ela, Kahawatura ela and Walapita ela. A follow up study of this Inter-basin translocation carried out in 1991 reported the establishment of their populations (except *Puntius titteya*) and even spreading on to adjacent streams.

Present study was carried out 33 years after the translocation and 29 years after the initial follow up with the objective of evaluating the status of these populations. The main sites of sampling were selected based on original translocation sites in addition to Koladeniya ela, a site to which three species had spread by 1991. Sporadic sampling was carried out in the Mahaweli River and several adjacent streams from Nawalapitiya to Peradeniya area to determine species present. Seining was carried with equal sampling effort of 15 minutes for each station. Diversity indices were calculated to compare the diversity among main sampling sites.

*Pethia cuningii* has undergone a taxonomic revision, and from this study it was confirmed that *Pethia reval* found in the Kelani basin was the species that was translocated in 1981, not *P. cuningii*. All the translocated species have well established populations. *Pethia nigrofasciata* was the most abundant and found in all the main sampling sites except for Ceypotha ela. It was also observed that *P. nigrofasciata*, *P. reval* and *R. vaterifloris* have expanded their range by dispersing to nearby streams. However, *Pethia titteya* was confined to Ceypotha ela. *Pethia reval* on the other hand has spread even to the main Mahaweli River and was recorded from the Geliyoa and near Gampola area. *Channa orientalis*, which was found in Ceypotha ela, which was never reported from Mahaweli basin, may have been introduced as a non-target species through translocation. These could disturb the survival of the native endangered species. Highest number of species was recorded from Kahawatura ela, which had the highest diversity indexes.

This translocation can be considered as successful, in terms of boost for the dwindling populations in their original habitat. However, none of these four species can be considered to be either rare or restricted in its natural range now.