The Silver Fish, *Rastrineobola argentea*

(Within East Africa locally know as Dagaa, Omena or Mukene)

**General Description**

*Rastrineobola argentea* a finfish is classified under the *Actinopterygii* (ray-finned fishes); *Cypriniformes* (Carps); *Cyprinidae* (Minnows or carps) and *Danioninae*. *R. argentea* is silver in colour with an overall nacreous sheen (Figure 1).

This small slender fish rarely exceeds a length of 8 cm. It has a distinct lateral line low on the body and running along the lower part of the caudal peduncle. The cheek is covered by thin suborbital bones. The caudal fin is yellowish in colour. Dead specimens have a distinct mid-lateral stripe.

Within the lake Victoria, the fish are found inshore and offshore. Juvenile fish migrate away from the shore after spending their larval stage in shallow areas. Adults stay near the bottom during the day and swim up near the surface at night. The principal diet of the fish comprises zooplankton and surface insects.

**Geographical Location**

*Rastrineobola argentea* is a small pelagic cyprinid endemic to the Lake Victoria Basin and Victoria Nile in Eastern Africa. Its common English name is the Silver fish. Locally it is know as Dagaa in Tanzania, Omena in Kenya and Mukene in Uganda. *Rastrineobola argentea*, is among the most successful indigenous species of

*Figure 1: Dagaa fish with characteristic nacreous sheen (source: http://www.manyandhealty.com/2014/10/ujue-umuhimu-wo-dagaa-kwo-ffya-yoko.html)*
Lakes Victoria and Kyoga after the introduction of the Nile Perch (*Lates niloticus*). Its biomass is estimated at 1.3 Million tonnes. Interestingly, despite predation from the Nile perch (*Lates niloticus*) and increasing fishing pressure, its biomass has increased over the last three decades due to ecological changes within Lake Victoria.

This species is apparently also found in Lake Bulera, Rwanda where it was introduced in the early 1990s to start up a fishery initiative.

**Processing:**
There are different drying methods of the dagaa. Often it is spread on drying surfaces such as raised racks (Figure 2). It takes up to 6-8 hours for the dagaa to dry, often depending on weather conditions. Dagaa is largely sundried for the market. Drying on racks rather than on the ground greatly improves post-harvest quality and output. Most of the post-harvest processing is done by women.

**Major Uses**
*R. argentea* is fished during the night. A study by Turyahweebwa (2014) illustrates the socio-economic importance of this fish in terms of effort and actual catch. Up to USD 2 million per annum in foreign currency is earned from this fish alone within Tanzania.

The dagaa has played a very important role in job creation, food and security nutrition, income generation (Figure 3) and food security, especially during the dry season when agricultural activities are reduced to a minimum. It is among the most accessible fishes in the region as food particularly for poorer households. This is not just due to the fact that it is among the cheaper fishes, but because of its small size, it is easy to sell in smaller units that are more affordable and at the same time can be distributed within a meal to several household members.

Traditionally its major uses are for human consumption (Figure 4) and animal feed. More than 40% of the dagaa catch is lost as a result of post-harvest losses. These losses are often attributed to poor handling. A lot of work has been done to reduce post-harvest losses and improve quality of fish products through embracing various value addition processes. Addressing this challenge and diversifying the products from this fish is crucial for food security and employment within the fisheries industries in the region.

Consequently in terms of use for human consumption, this is among the most versatile. Local and commercial products include powder used to enrich baby and children’s foods in porridge and sauces, whole pieces of the fish may be mixed with vegetables and various sauces. Over the past few years, seasoned, fried and packed dagaa (Figure 5) have been produced as a ready to eat snack.
The above fish species has potential for international exports but stringent EU health standards are stringent and thus there is need to undertake advocacy work to ensure post-harvest procedures are adhered to. EU licensed processing factories align themselves with the necessary guidelines.

References:


