

## **Brown Mudfish Identification & Management Summary**

### **Brown Mudfish (and Habitat) Identification**

The Brown Mudfish is a protected species which is present in this forest. Ernslaw One Ltd is currently undertaking to reduce impacts of our operations and ultimately protect and enhance our populations of this species.

The Brown Mudfish was first discovered in New Zealand in the 1860s. It is the most eel-like of the four species of mudfish, with the dorsal and anal fins being almost confluent with the caudal fin. The Brown Mudfish is the largest mudfish species in New Zealand reaching a maximum length of up to 175 mm. Fry spawned in autumn or early winter grow rapidly to about 70 mm by their first aestivation the following summer (Ling 2001).

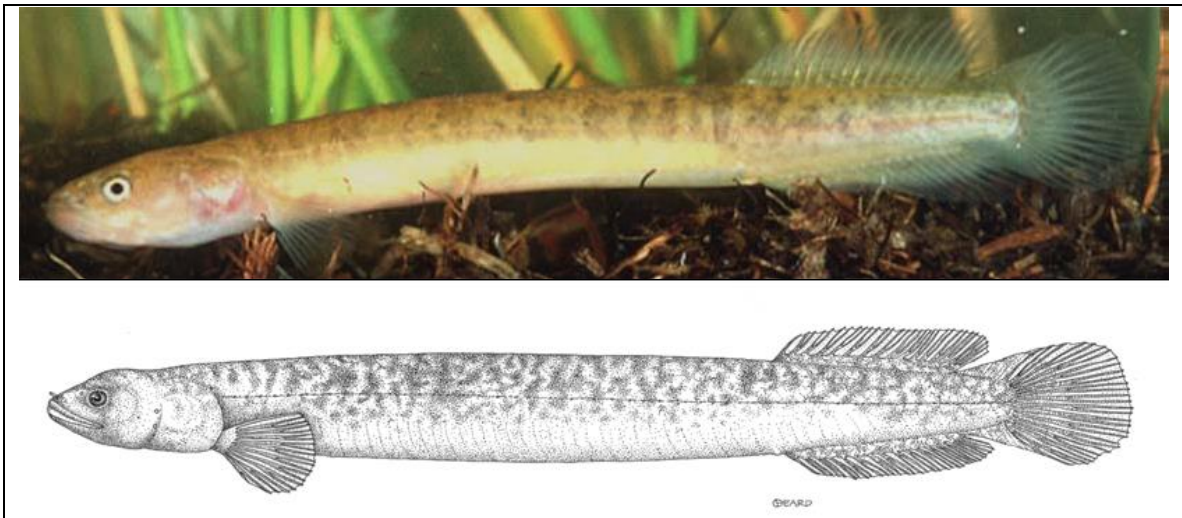


Figure 1: The Brown Mudfish (*Neochanna apoda*). Source: Ling (2001)

The main threat posed to Brown Mudfish is loss or modification of habitat by our operations such as drainage, harvesting, grazing, chemical operations, and invasive plant species such as willows.

Mudfish move out and spawn in vegetation surrounding a wetland which becomes part of the wetland when the water table rises, this area must be protected during the winter months to protect juvenile mudfish.

Brown Mudfish habitat consists of indigenous wetlands, especially the ephemeral edges of these wetlands which provide mudfish breeding habitat.

## **Brown Mudfish Management**

### **If workers or staff locates Brown Mudfish or potential habitat:**

- Stop any Machinery or chemical operations within the area.
- Notify Ernslaw staff

### **Subsequent Management by Ernslaw**

- Notify DOC.
- Five metre riparian buffer zones should be established around mudfish wetlands along with an additional fifteen metre buffer zone for desiccant spraying
- Weed surveillance and control should be carried out annually in wetland areas containing mudfish, low impact methods (e.g. hand pulling and drill and inject) should be used to reduce further damage to the habitat.
- Stock should be excluded from all compartments containing mudfish habitats.
- Machinery/vehicles should be excluded from mudfish wetlands and 5m riparian zones.
- Harvesting operations, in compartments containing mudfish wetlands, should only take place during the summer months of the year.
- Five metre riparian zones should be planted to buffer impacts from operations and to provide cover/habitat for mudfish. Native early successional, wetland margin, plants (e.g. Manuka and Flax) should be used as they will be more cost effective and will establish easily without extra maintenance.
- Best management practises should always be followed to ensure trees are directionally felled away and not dragged through mudfish wetlands and buffer zones.
- Refer Ernslaw One Brown Mudfish Management Plan for further detail.