Quick guide to New Zealand Galaxiidae

by Jody Richardson and Bob McDowall

Note: identification of galaxiid species relies on accurate fin ray counts; users should refer to McDowall, R.M. (1996) *Water & Atmosphere 4(3)*: 27 for instructions on correct counting of principal caudal rays and others. Where fin ray counts are given, occasional variants should be expected and it may be necessary to perform counts on more than one specimen.

For many species, the location and fish size may assist with identification. For such information, including photos of whole specimens and distribution maps, refer to McDowall, R.M. (2000), The Reed field guide to New Zealand freshwater fishes, or this web site http://www.niwa.co.nz/rc/freshwater/fishatlas/.

The taxonomy of the South Island non-migratory galaxiid group still requires work, with at least three distinct Otago/Southland species awaiting formal description and recognition. Recently
G. vulgaris was split into a northern (undescribed) and southern (true *vulgaris*) species. Until these tasks are complete, it will not be possible to identify all the galaxiid species with this quick guide.

This guide may not provide for identification of small juveniles, but there is a separate quick guide specifically for juvenile galaxiids that comprise the whitebait catch.

Start

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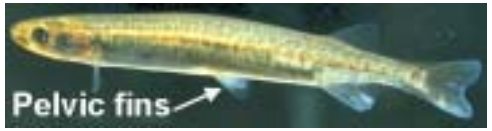
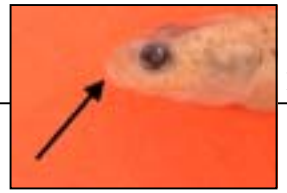
Are there any pelvic fins?



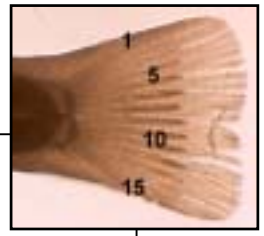
YES ↓

Is the lower jaw long and distinctly upturned?



YES ↓

Are there 15 principal caudal rays and five pelvic fin rays?



YES ↓

Lowland longjaw galaxias
Galaxias cobitinis

NO ↓

Upland longjaw galaxias
Galaxias prognathus

NO →

Are there less than 16 principal caudal rays?

YES ↓

Are there less than 7 pelvic rays?

YES ↓

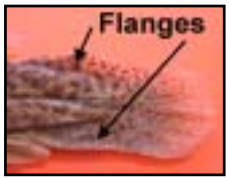
Are there six pelvic fin rays and 15 principal caudal rays?

YES ↓

Dwarf galaxias
Galaxias divergens

NO →

Is the tail rounded with large flanges?



YES →

Canterbury mudfish
Neochanna burrowsius

NO →

Are there 14 principal caudal rays?

YES ↓

Dusky galaxias
Galaxias pullus

NO ↑

Eldons galaxias
Galaxias eldoni

NO →

Bignose galaxias
Galaxias macronasus

NO ↑

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Brown mudfish
Neochanna apoda

YES ←

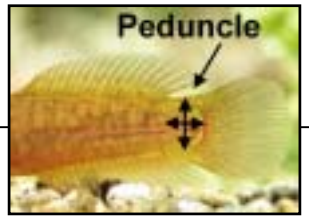
Does the dorsal fin have less than 14 rays?

YES ←

Black mudfish
Neochanna

NO ↑

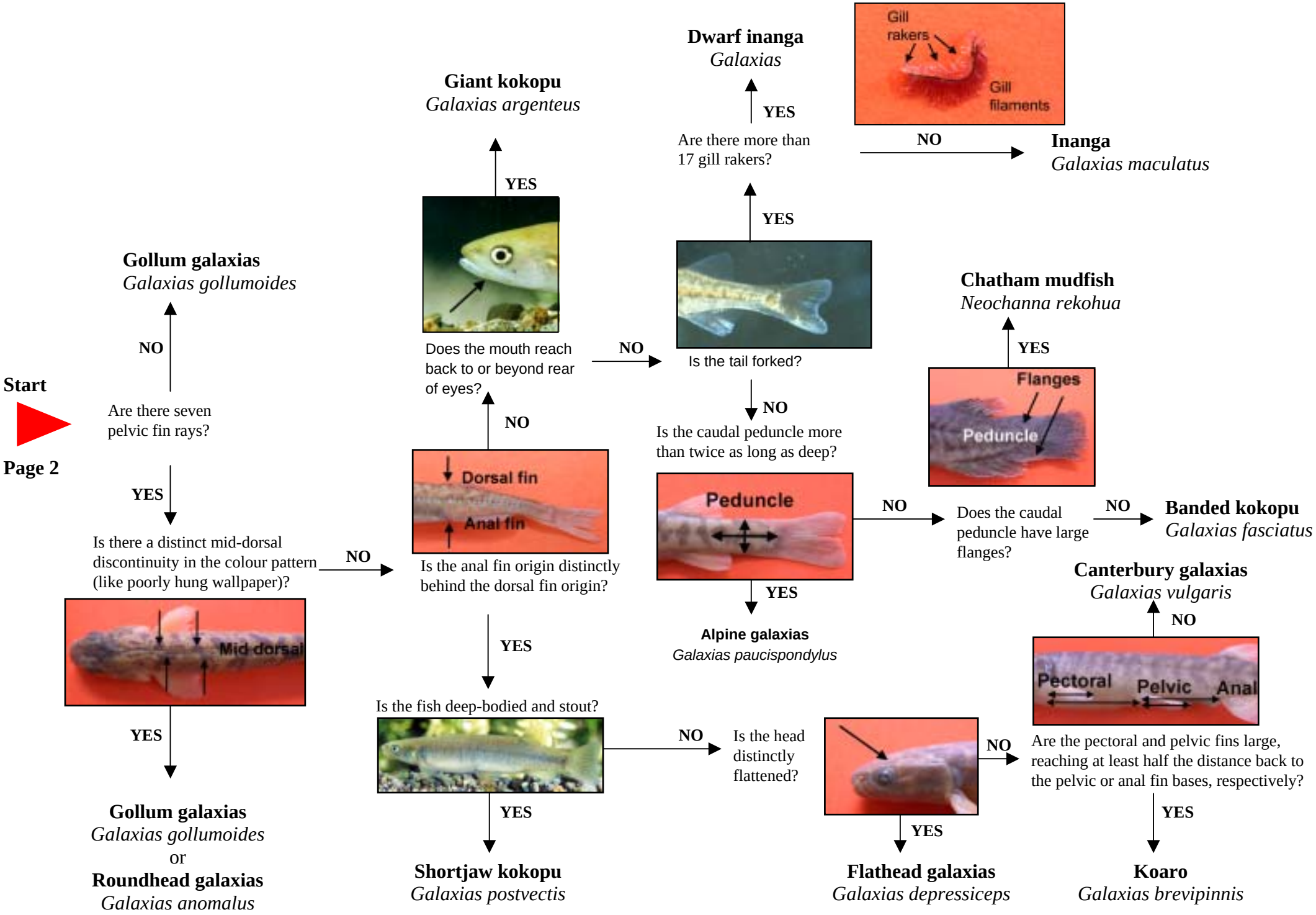
Is the caudal peduncle deeper than long?



YES ←

Northland mudfish
Neochanna heleios

NO ↑


Start
Page 2
Are there seven pelvic fin rays?
NO
Gollum galaxias
Galaxias gollumoides
YES
Is there a distinct mid-dorsal discontinuity in the colour pattern (like poorly hung wallpaper)?
Mid dorsal
YES
Gollum galaxias
Galaxias gollumoides
or
Roundhead galaxias
Galaxias anomalus
NO
Is the anal fin origin distinctly behind the dorsal fin origin?
Dorsal fin
Anal fin
NO
Does the mouth reach back to or beyond rear of eyes?
YES
Giant kokopu
Galaxias argenteus
YES
Is the fish deep-bodied and stout?
YES
Shortjaw kokopu
Galaxias postvectis
NO
Is the tail forked?
NO
Is the caudal peduncle more than twice as long as deep?
Peduncle
YES
Alpine galaxias
Galaxias paucispondylus
NO
Are there more than 17 gill rakers?
YES
Dwarf inanga
Galaxias
NO
Gill rakers
Gill filaments
Inanga
Galaxias maculatus
NO
Is the head distinctly flattened?
YES
Flathead galaxias
Galaxias depressiceps
NO
Are the pectoral and pelvic fins large, reaching at least half the distance back to the pelvic or anal fin bases, respectively?
Pectoral
Pelvic
Anal
YES
Koaro
Galaxias brevipinnis
NO
Canterbury galaxias
Galaxias vulgaris
NO
Does the caudal peduncle have large flanges?
Flanges
Peduncle
YES
Chatham mudfish
Neochanna rekohua
NO
Banded kokopu
Galaxias fasciatus