

# PURPOSE

These guidelines were developed by Tasmanian divers/snorkelers and scientists to highlight and minimize impacts to endemic and critically endangered handfish. The purpose is to:

- Create awareness/stewardship and best practice recommendations for diving with handfishes
- Safeguard handfish by minimising disturbance

## BEST PRACTICE:

### Know your handfishes!

Be aware of handfish species, sites, habitat, and key breeding times

### Maintain good buoyancy

Handfish live on the seafloor and can easily be disturbed by divers, snorkellers (& boaters)



## PARTNER ORGANISATIONS



## CONTRIBUTORS:

Neville Barrett, Tyson Bessell, Ella Clausius, Karla Dutton, Patrick Eberhard, Dane Jones, Olivia Johnson, John Keane, Tim Lynch, Caroline Mason, Pete Roberts, Jane Ruckert, Janet Rutherford, Jemina Stuart-Smith, Matt Teston, Brad Turner, Benita Vincent, Tasha Waller, Lincoln Wong,

## SUPPORT PROVIDED BY:



Images: Jemina Stuart-Smith, Tyson Bessell, Rick Stuart-Smith, Andrew Green  
Illustrations: Ella Clausius

## RECOMMENDATIONS:



Maintain good buoyancy & avoid touching handfish or their habitat (spotted handfish often flee and hide under divers)



Maintain a safe distance when observing handfish (stay arm's length away, minimum)



Minimise disturbance during critical times (e.g. breeding/egg-development)



Reduce the time spent taking photos (limit to 1 minute)



Limit flash photography to 5 images, & 10 seconds of video light



Consider social media sensitivities:

- Delay posting images (particularly eggs/young)
- Avoid disclosing exact locations (especially if sites are not publicly known)



Be aware of handfish locations or habitats when anchoring



Avoid taking large groups to handfish sites (4 ppl maximum)



Notify the handfish team directly if you see anything unusual or find a new site:  
[handfish.org.au/red-alert/](http://handfish.org.au/red-alert/)

[handfish.org.au](http://handfish.org.au) | [imas.edu.au](http://imas.edu.au)

# BEST PRACTICE GUIDELINES FOR DIVING & SNORKELLING WITH HANDFISH



A collaborative initiative promoting ethical diving with threatened and vulnerable handfish species in Tasmania.

# ABOUT HANDFISHES

They are small marine fish in the Family Brachionichthyidae (Anglerfishes), ranging between 60-151 mm in length. They live on the seafloor in a variety of habitats (rocky reef, sand/silt).

They have modified pectoral fins that look like hands which they use for 'walking' on the seafloor rather than swimming (but they can swim short bursts). They also have an illicium and esca – a structure on their head that is thought to function like a lure.

They lay eggs on structures that are attached to the seafloor, and several species have been observed guarding eggs until they hatch (several weeks).

## SPOTTED HANDFISH

*Brachionichthys hirsutus*

Known from 14+ small populations in the Derwent estuary and D'Entrecasteaux Channel, Hobart, Tasmania. They lay eggs in winter/spring.

 HABITAT: Sand/silt

 DEPTH: 1-60m (usually <15m)

 POPULATION: <2000 adults



Average length ~10 cm



Lay eggs on structures like ascidians (sea squirts)



THREATS

Habitat degradation, siltation, bottom fishing/dredging, pollution, turbidity, climate change, introduced species, direct disturbance, fragmented populations.

## RED HANDFISH

*Thymichthys politus*

Now known from two small populations in Frederick Henry Bay, Hobart Tasmania, there are thought to be fewer than 100 adult red handfish left in the wild. They lay eggs in spring. Their colour can be variable from light pink/beige to bright red.

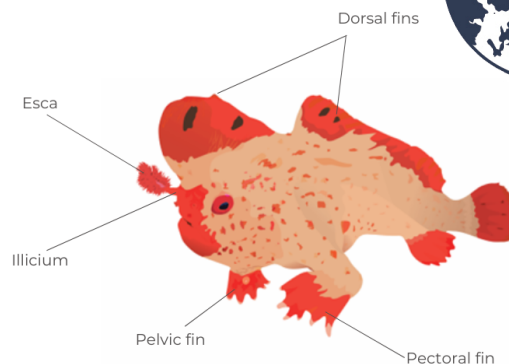


Average length ~8 cm

 HABITAT: Reef

 DEPTH: 1-20m

 POPULATION: 100 adults



Basic morphology showing key handfish features..



Lay eggs on structures like seaweed/seagrass



THREATS

Habitat loss, pollution, siltation, sea urchin habitat overgrazing, climate change, small/ fragmented populations, direct disturbance.

## THREATS & VULNERABILITIES

Threats for all species are generally centered around habitat degradation and loss associated with human impacts (historic and current day).

This includes introduced species impacting habitat, pollution and sedimentation, loss of essential spawning substrate and habitat for shelter, fishing activities, direct disturbance (e.g. boaters/ divers/ snorkellers), destruction of habitat by moorings and other coastal infrastructure, and climate change.

Handfish also have life history strategies that make them vulnerable to environmental change: no planktonic larval stage, and locomotion is via walking – which makes dispersal and escape from disturbance/ threats difficult.

## ZIEBELL'S HANDFISH

*Brachiopsilus ziebelli*

Last seen ~2007:  
Eaglehawk Neck, Tasmania  
Variable in appearance - mottled purple, or bright yellow/white.

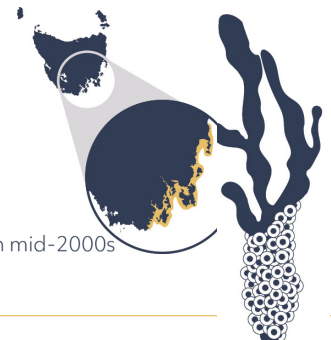


Length up to 15 cm

 HABITAT: Reef

 DEPTH: 5-20m +

 POPULATION: Last seen mid-2000s



THREATS

Not well understood. Habitat loss, direct disturbance, climate change.

Lay eggs on structures like sponges