

**Tasmanian Conservation Trust
comments on the**

**Draft Recovery Plan for the following species of
handfish:**

Spotted handfish – *Brachionichthys hirsutus*

Red handfish – *Brachionichthys politus*

**Ziebell's handfish – *Sympterichthys* sp. [CSIRO
#T6.01]**

**Waterfall Bay handfish – *Sympterichthys* sp. [CSIRO
#T1996.01]**

Tasmanian Conservation Trust
102 Bathurst Street
Hobart TAS 7000

Phone: (03) 62343552

Fax: (03) 62312491

E-mail: tct@southcom.com.au

Comments on the Draft Recovery Plan

Introduction

It is good to see that threats posed by pollution and siltation are recognised in this plan. The Tasmanian Conservation Trust (TCT) repeatedly asked for these issues to be addressed by the CSIRO workers when we were represented on the Recovery Team, but this obvious and self evident concern was ignored for no good reason.

However it must be pointed out that the key habitat threats outlined in both the draft recovery plan and issues paper, are probably only relevant to the spotted handfish.

The three other species appear to have a habitat preference that is mainly outside the estuarine areas effected by these threats. The red handfish is occasionally seen in Frederick Henry Bay in areas subject to the listed habitat threats, but is also found along the Tasman Peninsular, for example, and could be assumed to have a viable population in relatively pristine areas.

It is clear that spotted handfish have disappeared from some sites in the Derwent River, such as Nutgrove Beach in Sandy Bay, where they were once common. The population status of the other Tasmanian Handfish species is impossible to assess due to the very low number of observations over the last 25 years. Given the lack of any major threatening process, apart from collection, it is unlikely that these species are currently under significant threat, so the inclusion of these species in a recovery plan is probably not necessary. Certainly with the limited resources available there should be a clear priority given to the spotted handfish in the recovery process.

A key problem with this Recovery Plan and the recovery process is that the causes of the population decline of the spotted handfish remain unknown, and that no effective attempt has been made to determine the causes of this decline since the recovery process began.

Page 8 of the Issues Paper states, reasonably, that "*the cause of the reported decline of the spotted handfish has not been determined*". The Issues Paper then goes on to imply that there is a relationship between the handfish decline and the increase in the population of the introduced Northern Pacific seastar. This ignores the fact that the largest known population of spotted handfish occurs in an area of the Derwent Estuary where Northern Pacific seastars are very abundant and that handfish appear to have disappeared from parts of the D'Entrecasteaux Channel where the introduced seastar has not yet been observed.

The Northern Pacific seastar may well be part of a threatening process, along with the other possible risk factors mentioned in the Issues Paper. However, there needs to be strategy put in place to positively identify factors that effect spotted handfish population changes so that these can be managed if necessary. Simply listing a range of hypothetical threats after so many years of work and funding for this recovery process is very disappointing. Also disappointing is the fact that this list still does not explicitly include the possibility that toxic effects of

pollutants in the sediment may be a threat. This was raised as an issue when the TCT was a member of the recovery team and would appear to be an obvious threat.

Even the extent of the decline of the spotted must be questioned. There is anecdotal evidence that suggests that this species is becoming more abundant in the Derwent in areas separate to those where artificial breeding substrate have been located.

The recovery plan needs to support two main objectives:

1. The change in spotted handfish population needs to be better quantified. There needs to be survey work that will identify the range and size of the population as well as trends in population size. This will determine whether the range of spotted handfish is declining or increasing and whether the population of spotted handfish is declining, increasing.
2. If the decline in spotted handfish is significant, there needs to be a process that will identify the causes of the decline so that these can be dealt with.

Recovery Plan Aims

Most of the actions listed in the recovery plan are worth pursuing. There are two exceptions.

1. Resolving the taxonomy of the Waterfall Bay and Ziebell's handfish should be given a very low priority, and perhaps omitted from this list. These species appear to have a distribution that is large compared to the spotted handfish and not subject to the same habitat threat.
2. The aim to introduce artificial spawning substrate should be removed at this stage. There is not sufficient evidence to demonstrate that spawning substrate has been a limit to reproductive success or a cause of perceived population decline. Until this is done, the introduction of artificial spawning would seem to be unnecessary, and may actually pose a risk to the population. Before further widespread introduction of spawning substrate is undertaken, there should be a pilot study to ensure that eggs laid on artificial substrate are as likely to hatch in the wild as those on natural substrate.

Additional aims should be listed. Collecting for aquariums is mentioned as a potential threat for all handfish species, despite legal protection. Both education and enforcement are important ways to deal with this threat. In particular, it seems that the most likely way illegally caught handfish would be sold in any significant number would be as part of an otherwise legitimate shipment.

Two additional aims that relate to this point might be:

- promote community awareness of the protected status of handfish.
- provide direction and funding for marine police to check outgoing shipments of aquarium fish

Performance Criteria

The performance criteria have some shortcomings.

It would be good if it could be shown that "*populations demonstrably increase, or show signs of stabilising*", but:

- how can habitats be protected from threats if the threats are not clearly identified?
- why have a criteria relating to management of alien species when it these have not yet been shown to be a significant cause of decline?

Better performance criteria would be:

- spotted handfish populations are be monitored so that population trends can be identified.
- if a population decline is demonstrated, the cause or causes of this decline are to be identified.
- management processes need to be implemented to remove identified threats to spotted handfish so that populations demonstrably increase, or show signs of stabilising.

Conclusion

It has been many years since the Commonwealth Government started to fund research into the perceived decline in the spotted handfish. Given the amount of Government support, it is unfortunate that more information about the status of the spotted handfish population has not been collected. If the decline has been significant, it is deplorable that a more structured and successful approach towards identifying the causes of the decline has not been followed.

The new recovery plan needs to provide a strategy that will clearly identify population trends for the spotted handfish. If spotted handfish are shown to be in decline, then the reason for this decline needs to be clearly identified so that a solution can be developed.

While the status of the other handfish species covered in the plan is of interest, priority should be given to the spotted handfish.