

# BUSHFIRE RECOVERY ACTIONS FOR THREATENED FISH IN NSW

Photo credit: Luke Pearce

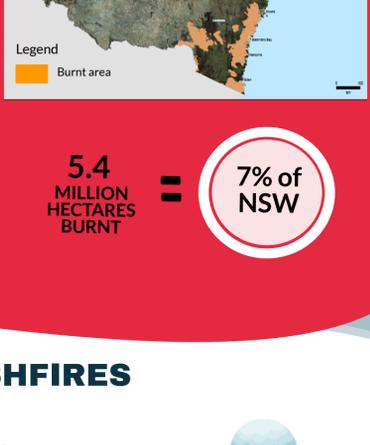
## 2019/20 BUSHFIRES



Between July 2019 and February 2020, extensive bushfires swept through eastern NSW, causing devastation along its path. Millions of hectares of bushland habitat were affected, which also affected hundreds of kilometres of aquatic habitat.



Before, during and after a bushfire swept through the endangered Macquarie Perch's habitat (Photo credit: Luke Pearce)



5.4 MILLION HECTARES BURNT

= 7% of NSW

## IMPACTS FROM BUSHFIRES



**High temperatures**

Water temperatures reach lethal levels for many native species



**Loss of habitat**

Important habitat for breeding and feeding is lost



**Runoff**

The lack of vegetation allows rainfall over recently burnt areas to wash ash, sediment and other material into waterways which create murky water and sudden changes in pH and oxygen levels



**Loss of insects**

Loss of common food sources for many fish



**Localised and widespread fish kills threatening the survival of fish populations**

## DPI FISHERIES RESPONSE

DPI Fisheries actively responded to the bushfires by rescuing and relocating fish from the most 'at risk' populations. Some fish were moved to safer waterways within their range, where available.

Some fish were taken to DPI Fisheries hatcheries for temporary protection or for captive breeding. DPI Fisheries can then release them and/or their offspring when suitable habitat becomes available.



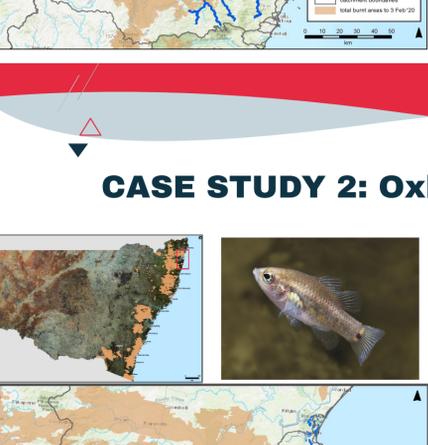
Oxleyan Pygmy Perch rescue (Photo credit: John St Vincent Welch)

### CASE STUDY 1: Eastern Freshwater Cod



47% Range burnt

98 Fish rescued

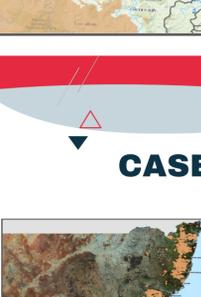


Status in NSW: Endangered

Habitat burnt: 533 km

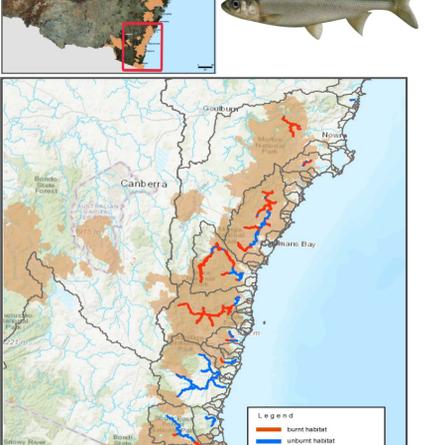
**Actions taken:** 98 fish were rescued and either relocated into storage dams for temporary protection or taken to DPI Grafton Fisheries Centre to support a captive breeding program.

### CASE STUDY 2: Oxleyan Pygmy Perch



71% NSW range burnt

252 Fish rescued



Status in NSW: Endangered

Habitat burnt: 10,718 ha

**Actions taken:** 252 fish were rescued and relocated to DPI Grafton Fisheries Centre for temporary protection and to support a future captive breeding program.

### CASE STUDY 3: Australian Grayling



64% NSW range burnt



Status in NSW: Endangered

Habitat burnt: 574 km

**Actions taken:** Rescues weren't appropriate for Australian Grayling, as their larvae develop at sea before migrating back into stream into freshwater reaches of coastal estuaries. Recovery efforts for the species included habitat and population surveys and habitat restoration and monitoring.

## A FIRST FOR NSW

The rescue of threatened fish during the 2019/20 bushfires was a first for NSW. Some species have never been kept in captivity, and therefore little is known about their captive breeding requirements.

*DPI Fisheries is working with native fish experts to manage the recovery, breeding (where appropriate) and release of rescued threatened fish currently housed at hatcheries to maximise the likelihood of success.*

Photo credits (clockwise from top right): Luke Pearce, DPI Fisheries, Luke Pearce, DPI Fisheries, John St Vincent Welch and Matthew McLellan



## RECOVERY MONITORING

DPI Fisheries has revisited some of the affected sites to survey fish populations in the aftermath of the bushfires.

Threatened species habitats are being monitored to identify the best possible conditions before releasing the captive fish.

Recovery of some species and their habitats will take years and will require the collaboration of government and local communities.



Oxleyan Pygmy Perch rescue (Photo credit: John St Vincent Welch)

## HOW YOU CAN HELP



### IMPROVE LAND MANAGEMENT

If you live on or manage land adjacent to threatened species habitat, prevent stock from directly accessing waterways, manage and protect vegetation on river banks, revegetate degraded riparian areas and prevent erosion.



### REPORT A SIGHTING

Participate in the NSW DPI Threatened Species Sightings Program. If you catch or see a threatened fish, take a photo, record the details and send the information to the NSW DPI Threatened Species section by completing the online form at: [www.dpi.nsw.gov.au/fishing/threatened-species/report-it](http://www.dpi.nsw.gov.au/fishing/threatened-species/report-it)



### BECOME INVOLVED

Become involved in habitat restoration or other programs that improve habitat for native fish.



### RELEASE FISH CAREFULLY

If you accidentally catch a threatened species, release it carefully causing the least possible harm and consider changing your fishing location, baits or fishing rigs.

## FOR MORE INFORMATION

Web: [www.dpi.nsw.gov.au/fisheries](http://www.dpi.nsw.gov.au/fisheries)  
Email: [fisheries.threatenedspecies@dpi.nsw.gov.au](mailto:fisheries.threatenedspecies@dpi.nsw.gov.au)