



Marine Life Society of South Australia Inc.

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"Understanding, enjoying & caring for our oceans"

30/9/07

Hon Rory McEwen
Minister for Agriculture, Food & Fisheries
GPO Box 2832
Adelaide SA 5001

Dear Minister,

I write on behalf of the Marine Life Society SA (MLSSA) who are leading a coalition of concerned organisations including the Conservation Council of South Australia (CCSA), Adelaide University Underwater Club (AUUC), the Adelaide University Scuba Club (AUSC), Fishers For Conservation (FFC), Flinders University Underwater Club (FUUC), Friends of Gulf St Vincent (FoGStV), Seadragon Foundation Inc (SFI), Scuba Divers Federation of South Australia (SDF) and The Wilderness Society (TWS) all of whom are concerned the inadequate protection given to the Western Blue Groper (*Achoerodus gouldii*) and the total lack of any protection for the Harlequin Fish (*Othos dentex*), is leading to a significant decline in the populations of these two superb creatures.

Following the letter we wrote to you in May 2007 asking for better protection of the Western Blue Groper, we have been inundated by groups and individuals expressing concern at the numerous photographs of large Western Blue Groper and Harlequin Fish being displayed as trophies on various charter boat company websites. Two sample pictures of such "trophy" fish are included with this letter.

Your letter of reply to our concerns is factually correct in that the illegal take of the Western Blue Groper is not an identified problem, at least throughout much of the closed area. The main problem lies in the fact that Groper and Harlequin stocks are being reduced by the removal of large mature fish.

As well as large adult Gropers being taken, we are concerned at the lack of awareness by fishers to the fact that juvenile Blue Gropers are green and are often not recognised as Gropers. These fish are then sometimes used as bait or in rock lobster pots (S. Shepherd, pers. obs., 2002; Shepherd, 2006).

These fish are long-lived and slow growing, taking 15 years to reach sexual maturity at 60 cm, which is the minimum size they may be taken under the existing rules. They live for up to 70 years, and reach a maximum size of 1.6 m.

This species is strongly territorial, so it can easily be exterminated locally by fishing. Gropers are largely sedentary, slow-moving, and inquisitive (i.e. in some areas are known to approach fishers and boats), hence fishers with reef-finding and fish-finding technology can now easily find and locate groups of groper (particularly over clear-water offshore reefs, and around islands, and off rocky headlands), and once found, Western Blue Groper are "sitting ducks", so to speak. It is widely recognised that fish with such population dynamics and behavioural traits are vulnerable to over-exploitation and population decline.

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MLSSA supports the ReefWATCH
initiative.



Western Blue Groper used to be common throughout Investigator Strait, and on the southern coast of Yorke Peninsula, but adults have not been seen on southern Yorke Peninsula since the 1960s when they were fished out. They still occur on northern KI due to their protection in the gulfs.

Western Blue Groper have a strong population structure and they change sex with age, so fishing can disrupt population structure and dynamics.

Recent surveys by Dr Scoresby Shepherd across much of the central and western coastal waters of South Australia have shown that:

(i) juvenile Western Blue Groper abundance appears to be highest in a limited type of habitat (i.e. sheltered nearshore reef lagoon habitats adjacent to exposed coasts);

(ii) densities of adult fish are low, and

(iii) both adults and juveniles exist over a small depth range, and recruitment levels in most parts of SA are likely to be low.

(iv) with a larval duration of greater than 1 month, after a winter spawning, recruitment of young is likely to come from spawning adults in the eastern great Australian Bight, and off southern Eyre Peninsula.

A number of long-lived, slow-growing, site-associated, sex-changing reef fish species which are very similar to Western Blue Groper in life history, are listed in the International Union for the Conservation of Nature and Natural Resources (IUCN) Red List as endangered. Fish with these life history traits cannot tolerate fishing at the same levels as faster growing, shorter life span, earlier maturing reef fish.

Given its longevity and diet, Western Blue Groper may be a "keystone" species in the reef habitats where it occurs, and there may be ecological cascade effects from the extirpation of groper from reefs.

Western Blue Groper are fished across most parts of the known range by both commercial (State and Commonwealth) and recreational fishers, using a variety of methods, and Western Blue Groper is also a bycatch species on hook and line, and in nets and lobster pots. Increased fishing technology during recent years has enabled more fishers to locate and target large adult Western Blue Groper on offshore reefs and around islands, and such fishing has been heavily promoted within the charter boat industry during the past decade

Bag limits and boat limits exist across South Australia, but it is not known how effective these are in maintaining population structure and abundance. No stock assessments or fisheries assessments have been undertaken, and thus there is no firm knowledge of the population sizes and recruitment levels over time, or the total numbers taken per annum by commercial and recreational fishers, or of the sustainability of fishing under the current regulations.

Size limits appear not to be enforced. An unknown number of gopers over 1m are being caught by charters and other offshore recreational fishers. Examples have been publicly shown in recent years in magazines and on web sites (an incomplete list is available).

It is recognised that a low level of fishing mortality may be enough to keep a slow-growing, recruitment-limited species such as Western Blue Groper in very low densities, even in the absence of intense fishing pressure from any source.

The questions regarding protection of the blue groper raise welfare issues which have been considered extensively in recent years and this has been well reviewed in Huntingford et al. (2006) *J. Fish Biol.* 68, 332-372.

It was concluded that conditions that produce unacceptable levels of anxiety, fear, stress, sickness, pain ...etc in fish should be minimised.

Although there is a closure to Western Blue Groper fishing in S.A. Gulfs and Investigator Strait waters, and the species is also protected in a number of small Aquatic Reserves, it appears that this is insufficient as a means of protecting Western Blue Groper in South Australia, because:

(i) the species does not occur in the upper and most of the central parts of either gulf due to lack of suitable habitat and oceanographic conditions, and therefore only a small part of the species range in S.A. is formally protected;

(ii) some fishers appear not to adhere to the prohibition of fishing for Western Blue Groper in Investigator Strait, or offshore reefs and islands within the closed area, the southern boundary of which spans from western KI to southern Eyre, and illegal catches appear not to be monitored;

(iii) there has been increased targeting of this species in offshore areas during the past decade, particularly by charter boats operating off the central and western coasts of S.A.; and

(iv) some reef fishers do not recognise juvenile WBG when they are caught as bycatch, and small specimens are thus retained for use as bait.

A considerable number of reports (spanning three decades) have alluded to the decline of populations of this species in South Australia, and consequently, there have been various calls for the complete protection of Western Blue Groper for at least 30 years. For a number of years, various researchers have recommended that Western Blue Groper be fully protected under the *South Australian Fisheries Act*, and this call is reiterated here. Notably, in 2005, the S.A. Marine Scalefish Fisheries Management Committee supported the full protection of this species under legislation.

We ask that the present area of protection, as detailed in Section 42 of the Fisheries Act, be extended to cover the entire SA coastline for both the Western Blue Groper and the Harlequin Fish.

Further we ask that the following actions be initiated to ensure the long term survival of the Western Blue Groper and the Harlequin Fish.

- Legislative protection - there is a clear need for the extension of the current protection for these fish. This could include listing as endangered under the Australian Government's Environment Protection and Biodiversity Conservation (EPBC) Act (1999) and the South Australian National Parks and Wildlife Act as well as extension of current protection under the Fisheries Act to cover all State waters.
- The size limit on Western Blue Groper be abolished and all caught fish must be returned to the sea.
- The catching and photographing of "trophy" fish be banned, to stop the exposure of the fish to the air for unacceptable amounts of time and to protect their protective slime coating from damage from increased handling.
- Increased and maintained research and monitoring for the species such as the Reef Watch 'Feral or in Peril' programme. (Western Blue Groper is currently one of the 'in peril' species targeted by this programme).
- Funding to research the effects of human impacts on the marine environment and reef habitat in particular, i.e. sedimentation, excess nutrient inputs and other pollution.
- Develop policies and education campaigns to encourage compliance with current size and catch limits; and to develop policies and education campaigns to aid in the understanding and identification of the Western Blue Groper during its life cycle.
- Develop policies that reduce bycatch of this species. (e.g. pot and trap designs that reduce the bycatch of fish should be encouraged)
- The use of Western Blue Groper as cray pot bait should be prohibited by regulation under the Fisheries Management Act (2007).
- Protection of the Western Blue Groper 'hotspots' for both adult and juvenile fish in marine park sanctuary zones together with other protected species. We should however allow divers (scuba and free divers, but not spearfishermen) access to these areas.

Regarding the other species of conservation concern here, Harlequin Fish is a southern Australian endemic with a limited geographic distribution (S.A. and W.A.), and a limited known depth range. It is a site-associated on coastal reefs, over a narrow depth range, and has vulnerable population characteristics, similar to other species in the Serranidae family. Although there is a paucity of quantitative information about population sizes, it is likely that the relative abundance of this species in S.A. is much lower than in W.A.. There is concern that abundance may have declined over time in areas where water quality is reduced, and reefs are degraded. Harlequin Fish is caught recreationally and (to a lesser extent) commercially across its range by a number of methods, with few controls on the capture, particularly in S.A., and no investigation of the potential impacts of fishing has been undertaken. This fish is considered to be rare and we recommend it be given "Threatened" status.

We earnestly ask that you consider all of this information and act to protect the Western Blue Groper and the Harlequin Fish in the same way as you protected the Weedy Seadragon and the other unprotected Syngnathids after the request by MLSSA two years ago.

Yours sincerely

Philip Hall
(President MLSSA)

CC:

The Hon. Gail Gago, MLC
Minister for Environment and Conservation,

The Presiding Officer
Ms Cath Cooper
Fisheries Council