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Committee Secretary
Senate Environment and Communications References Committee
PO Box 6100
Parliament House,
Canberra ACT 2600

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Dear Committee Secretary and Members,

Inquiry into Australia's faunal extinction crisis: re-adoption

Thank you for your invitation for supplementary or additional submissions to your enquiry into Australia's faunal extinction crisis. Since making our initial submission we have had much more direct experience of how Australia's environmental protection legislation, and the oversight of compliance with that legislation, has been failing.

We welcome the opportunity to bring this experience to the Committee's attention as one example of how, despite all the legislation, recommendations and good intentions, we are watching an area of richly bio-diverse habitat being steadily degraded, threatening its population of a listed endangered mammal, other threatened fauna and flora and at least one endangered ecological community.

Since April 2018 our organisation has been conducting a photo-monitoring survey for the endangered mahogany glider, *Petaurus gracilis*, on an area of just under 2000 hectares to the north of Townsville. Most of the land constituting our survey site is freehold (1850 ha), with two smaller 40 hectare blocks under separate tenure: a local government nature reserve, and a block of unallocated state land. Our activities are funded by a grant from the Queensland Department of Environment and Science.¹ The ongoing project involves regular trips to set up motion-sensitive cameras in transects across the site, with the intention of covering as much of the area as possible. An agreement with NQ Dry Tropics NRM, the leaseholder and our organisation (Townsville Branch, Wildlife Preservation Society of Queensland), allows us access to the freehold land. Separate permissions give us access to the state land and the Townsville City Council reserve.

¹ Community Sustainability Action Grant, CSAC 17074.

DESCRIPTION OF THE LAND AND ITS CONSERVATION VALUES IN RELATION TO THREATENED FAUNA.

The site contains the following endangered ecosystems: *Melaleuca viridiflora* woodlands (of which more detail below), palustrine wetlands, strand and foredune shrublands and coastal vine thickets. Open woodland on the site includes an excellent representation of tree species favoured by the mahogany glider for denning (trees with hollows), mobility (tall trees for launching) and for feeding throughout the seasons, for example: *Corymbia clarksoniana*, *Corymbia tessellaris*, *Corymbia dallachiana*, *Eucalyptus platyphylla*, *Eucalyptus tereticornis*, *Albizia procera*, *Acacia* spp and *Xanthorrhoea* spp – the latter frequently forming an understorey with *Melaleuca viridiflora*.

The greatest part of the land being surveyed consists of the two adjoining blocks of freehold tenure (hereinafter referred to as Lot 1 and Lot 2). Prior to the land being stocked with cattle in April 2016, analysis by an experienced botanist and wildlife ecologist, formerly employed as principal botanist with the Queensland Herbarium and as a conservation officer with the Queensland Government, indicated that the land had never been subject to grazing of any significance, if at all.² Supporting this opinion is the fact that the Bruce highway runs along the properties' western boundary and several 4WD tracks run through it to the beach, so cattle would have been readily seen if present, yet direct, reliable, personal observation over a period going back at least to the 1970s, has confirmed cattle have never been observed on this land.

Away from the tracks leading from highway to beach, which had been heavily used by campers, fishers and their 4WD vehicles, there was in fact very little evidence of weed incursion or damage to native vegetation, other than by intermittent wildfire and a PowerLink easement which would have been first cleared before mahogany gliders were scientifically recognised. If any significant grazing had occurred in the past, weeds would have inevitably been introduced and would have spread throughout the property. There would also have been signs of infrastructure – eg feeding stations and yards – and of previous cattle presence, such as walking pads (tracks) and trampling around water-holes. None of these were observed prior to 2016. In fact Lot 1 was in such good condition that it was recommended for acquisition to be added to Queensland's National Parks estate.³ Our understanding is that it was lack of funding, not lack of conservation value, that prevented the Queensland Government from attempting to acquire the area for conservation.

Broad leaf tea-tree (*Melaleuca viridiflora*) woodland. The recommendation for National Park acquisition was due in large part to the significant stand of mature and intact broad leaf tea-tree (*Melaleuca viridiflora*) woodland, which occupies between 60-70% of Lot 1. When occurring in high rainfall coastal Queensland, as it does here, this woodland is classed as an *endangered ecological community* under the EPBC Act 1999.

This *M. viridiflora* woodland also occupies approximately 50% of Lot 2. Although a large proportion of the woodland on this block was cleared in the 1980s, what currently exists is high quality regrowth that is advanced enough to meet the criteria specified for listing under the EPBC Act. Aside from a somewhat fragmented area between the Seaview Range and Cardwell, the vegetation on Lot 1 of this site, and to some extent on Lot 2, represent possibly the largest remaining example of this woodland in good condition. Although remaining areas of EPBC-listed *M. viridiflora* woodlands are scattered throughout the Wet Tropics and Central Queensland Coast Bioregions, most are either small and fragmented or heavily invaded by weeds.

² Jeanette Kemp, Pers.comm.

³ Correspondence provided by J. Kemp, November 2018.

Mahogany glider – *Petaurus gracilis*. Although not previously surveyed for these mammals, both blocks were mapped by the Queensland Department of Natural Resources, Mines and Energy (DNRME) as containing essential habitat for the endangered mahogany glider, *Petaurus gracilis*. In particular the *Melaleuca viridiflora* woodlands are a rich source of nectar and insects, which are important for an animal that needs to move around a large territory according to seasonal changes.

Our camera surveys began in April 2018 and, despite problems of access caused by a washed-out creek crossing and high water levels for many months of both 2018 and 2019, we have now completed numerous transects across areas of Lots 1 and 2 and the Local Government nature reserve. Most importantly, we have established beyond doubt that this land hosts a population of *Petaurus gracilis*, one of Queensland's and Australia's most endangered mammals.⁴

The mahogany glider, whose identity remained unknown until 1986, has a precarious hold on existence. It is found only along a narrow strip of coastline, about 150 km in length, generally below 120 m elevation. Large areas of its habitat have been lost to agriculture, horticulture, aquaculture and forestry (pine plantations), while other habitat areas have been degraded by intensive grazing or carved into fragments by road, rail and powerline corridors. It is estimated that approximately 50% of its original habitat has been lost and less than 50% of what remains is on protected land. In 2011 cyclone Yasi destroyed 100% of the canopy across its habitat. This progressive habitat loss, fragmentation and lack of connectivity deprive the animals of food, shelter and territories large enough to support them, isolate populations and often mean individual animals are forced to the ground where they are killed on roads, mauled by dogs and trapped on barbed wire fencing. Their current total population throughout their extremely limited range is unknown but is estimated at around 1,500⁵.

The 2007 Recovery Plan noted that:

“as clearing has reduced and severely fragmented glider habitat, any remaining habitat still used is considered critical to survival.”⁶

Moreover, the population recorded on this land (Lots 1 and 2 and the small local government reserve) are living at, or very close to, the southern limit of their range. This actually *increases* the priority for protection for, as Kemp and Kutt have pointed out:

“for species on the edge of their range [such localities] may prove important with the onset of greenhouse conditions, which may change vegetation distribution.”⁷

Meanwhile the “thickening” of vegetation in some areas of glider habitat further north, arising from altered fire regimes and very difficult to reverse, is another factor in the need to ensure all habitat at the southern edge is protected and maintained in good health.

Other fauna: In addition to the glider, we draw your attention to the fact that *M. viridiflora* woodlands are known to be an important resource for at least two threatened, and four seriously at risk, butterflies.⁸ One of these, the **Apollo jewel butterfly, *Hypochrysops apollo apollo*** (vulnerable, Nature Conservation Act 1992 (Qld)) is entirely dependent on the unusual **Ant plant, *Myrmecodia beccarii***, with which it has a symbiotic relationship. Like the butterfly that it supports, the epiphytic ant plant is itself a listed species (vulnerable, EPBC Act 1999) and

⁴ Our camera records are verified by members of the Mahogany Glider Recovery Team

⁵ *Petaurus gracilis* - Mahogany Glider SPRAT profile

⁶ Parsons, M and Latch P., 2008

⁷ Kemp, J and Kutt, A 2004

⁸ Braby, M., 1992

grows almost exclusively on *M. viridiflora* as its host tree. It also is here at the southern edge of its range.

The Queensland government also maps this land as essential habitat for the **southern black-throated finch** *Poephila cincta cincta*. We cannot confirm the presence of this bird but, if it is present, the degradation of habitat from overgrazing of the seeding grasses on which the birds depend, and the introduction of weeds (especially exotic grasses) would be of huge concern. Aside from the Galilee Basin, where it now faces very different threats, its remaining habitat has dwindled to a few isolated pockets, largely as a result of expansion of grazing.

CONCERNS ABOUT THE LAND AND THREATENED FAUNA; IMPACTS OF GRAZING

The freehold lots were leased by the absentee owners to a local cattle grazer in 2014 and were first stocked with cattle in April 2016. When we began our surveys in early 2018 we noted that a smaller number of horses were also being kept on the properties. As our survey work progressed we became increasingly concerned about the impacts grazing was having on this land and how the threatened fauna, and especially the mahogany glider, would fare as the habitat continues to degrade.

We have observed the following:

- a) Evidence of heavy grazing of young *Albizia procera* trees by cattle. These trees are a very important food resource for the gliders, which feed on the sap exuding from the bark, especially at lean times when few trees are flowering. If cattle continue to devour the seedlings and saplings this resource will eventually be lost.
- b) Evidence that the crowns of grass trees, *Xanthorrhoea* spp. are being grazed – damaging another food resource for the gliders which feed on their sap and nectar.
- c) Introduction and spread of invasive weeds. As noted above, away from old vehicle tracks through to the beach, weeds were rare to non-existent prior to the introduction of cattle. Now they are appearing throughout the property and will continue to do so. Even those weeds which are not favoured by cattle (and therefore not spread in their dung) take advantage of the damage and disturbance that cattle cause to the native understorey and soil, and spread easily. Some we have observed are *Cassia obtusifolia*, *Mimosa pudica*, *Sida* spp., *Centrosema* spp., and many others.
- d) Erection of 4-strand barbed wire fences around property boundaries, holding yards and loading facility. All barbed wire is a threat to wildlife but fences with top-strand barbed wire are a particularly deadly hazard for gliding and flying mammals and many birds. Females carrying pouch young are especially at risk.
- e) Felling of large trees along fence lines and boundaries, reducing available den sites and essential 'launch' trees, and the bulldozing of hundreds of smaller ones.
- f) Reduction and, in some cases, total loss of ground cover resulting from grazing and hoof-trampling, revealing some large areas of highly erodible bulldust. Sediment runoff, along with nutrients from tonnes of manure, would very quickly flow into the GBR lagoon which lies just offshore. It is also this trampling and the creation of cow pads (tracks) right across both properties which lead to changes in the hydrology of the *M. viridiflora* woodlands, ultimately threatening the survival of this unique ecological community and the fauna that depends on it.
- g) Evidence of cows' hooves pock-marking and compressing the soil, squashing tuberous plants like terrestrial orchids, including the threatened *Habernaria rumphii* (for which DNRME also lists this land as essential habitat), and reducing oxygen permeation into the soil.

It is important to point out that the existence of a ground layer of predominantly native species (60% or more of total vegetation cover) is one of the condition thresholds for establishing the integrity of the EPBC listed broad leaf tea-tree ecological community – and this ground layer is being steadily and systematically destroyed by cattle.

Because of what we were witnessing we made a submission in June this year to the Compliance Office within the Department of Environment and Energy (DEE). This documented our observations and our grave concerns at the inexorable degradation of unique ecosystems and of habitat known to be critical to endangered species, without any apparent regulation or control from either State or Federal government.⁹ We recommended that action should be taken against the landowner for failing to notify the Department of, or seek approval for, the new activities being undertaken on the land, since this is in contravention of the Department's own requirements. We also recommended that cattle be removed from the properties in order to halt the ongoing damage and allow recovery. We offered to accompany Departmental officers on a site visit so that we could demonstrate the damage that was occurring.

We received the following response:

The responsibility for land use planning and approvals rests with the local and state governments; however, the Commonwealth Government may become involved when there is a threat to defined matters of national environmental significance protected under the *Environment Protection and Biodiversity Conservation Act 1999*.

As you are aware, matters of national environmental significance include threatened species and ecological communities, among others. The Commonwealth Government's involvement in any activity or new development is confined to those significantly impacting on protected matters.

The Department have been in contact with the representatives from [REDACTED] regarding grazing activities and their obligations under the Act, and are continuing to monitor the site. Should it be determined that any new activities and/or intensification of agriculture activities is likely to have a significant impact on protected matters such as the endangered ecological community Broad leaf tea-tree (*Melaleuca viridiflora*) woodlands in high rainfall coastal north Queensland, the endangered Mahogany Glider and its habitat, or the Vulnerable *Myrmecodia beccarii* – Ant Plant, the Department will take the appropriate action.¹⁰

We replied to this email on 11/7/19 with two questions:

- How much damage to defined matters of national environmental significance (MNES) must occur before action is taken?
- How is the site being monitored? By what method and how often?

These were not rhetorical questions and it is disappointing that, a month later, we have received no response and our offer to view the property with DEE staff has not been taken up. Without being given such quite basic information, without knowing what approach, advice, requests or recommendations (if any) have been made to the landowners or the leaseholder, and without being able to visit the site with DEE staff and show them our concerns on the ground, we cannot

⁹ Submitted by email 6/6/2019. This submission could be made available to your committee, as a confidential document, on request.

¹⁰ Email received from DEE Compliance Office 28/6/2019. Company name (owners) redacted by us.

have confidence that the protection of this exceptionally valuable land and its fauna is in "safe hands". Indeed, the inescapable evidence of our own eyes, which have witnessed the steady degradation of this country at close quarters, show the opposite is true.

PROBLEMS WITH GOVERNMENT LEGISLATION, MAPPING, OVERSIGHT; LACK OF STRINGENCY IN ADVICE TO LANDHOLDERS; UNSATISFACTORY RESPONSE TO REPORTS OF ENVIRONMENTAL DAMAGE AND NON-COMPLIANCE

1) Despite the fact that under federal legislation, namely the EPBC Act 1999, *M. viridiflora* woodlands found on this land have a high level of classification, the Queensland Dept of Natural Resources, Mines and Energy (DNRME) maps this regional ecosystem as "of least concern", while simultaneously mapping it as "essential mahogany glider habitat". The disparity between Federal and Queensland classification is both confusing and disturbing. The incongruity of labelling an area of essential habitat for an endangered species as being "of least conservation concern" is incomprehensible.

Similarly, there is not infrequently disparity between the conservation status of species under Federal and State legislation. This may be understandable where a species occurs in more than one State, with different population sizes, environmental conditions and threats. However, it makes no sense for a species like the Apollo Jewel butterfly, *Hypochrysops apollo apollo*, which is listed as Vulnerable under Queensland's Nature Conservation Act 1992, but as Least Concern under the EPBC Act 1999 – *when the species only occurs in Queensland!*

2) Following the classification of high rainfall, coastal *M. viridiflora* woodland as an endangered ecological community in June 2012, landowners were required to seek Federal approval before undertaking certain activities on land where this community exists. These include the introduction of:

"a new, intensified or changed activity [that] could have a significant detrimental impact on the ecological community . . . [such] as introducing grazing to an area that has not been previously grazed or has not been grazed for some time."¹¹

As we have argued, grazing *is* a new activity on the bulk of this land, and if did occur in the past it was many years ago and on a much smaller scale. Therefore the grazing which was introduced in 2016 should not have proceeded without approval. Yet it did proceed and continues to proceed, apparently without either approval or consequences for the landowner or leaseholder. Other activities that need Federal approval, like "clearing of understorey vegetation" and "alterations to land which affect natural hydrological regimes", are also being carried out daily by the cattle themselves as they consume the understorey vegetation and trample the ground. Again, no action is taken and the only negative consequences fall upon the environment itself: the land, the flora and the fauna.

3) Language used in advice given to landholders is weak, implying no firm obligation on their part. For example it is stated that:

"Any activities ... likely to have a significant, irreversible or long-term detrimental impact ... **may** need Australian Government approval" (our emphasis).¹²

Thus no compulsion is indicated, even when the damage is likely to be significant, irreversible or long-term! There are other examples. Elsewhere the language suggests that, if unsure,

¹¹ SEWPC *Nationally protected broad leaf tea-tree . . . does it affect your land?* 2012.

¹² *Ibid.*

landholders **can** get advice about what is and isn't allowed, or when approval is necessary, but never indicates that seeking such advice is mandatory.

Language that, by default, encourages landholders to self-assess their need for advice or implies that the need to seek permits is merely optional, does disservice to landholders and the environment, and is more likely to produce carelessness than diligence.

Similarly, when requirements are breached or approvals are not sought, but the appropriate authority takes no action, this creates a culture of "she'll be right" and the belief that, essentially, landholders are unlikely to be challenged or penalised for infringements.

RECOMMENDATIONS

1. End the disparity that exists between State and Federal jurisdictions with regard to classification of ecosystems and species. Where a species or ecosystem (or ecological community) exists in only one State, it is unacceptable for it to be accorded a high conservation status by one jurisdiction, but a low one by the other.

An example of this has already been given in relation to the Apollo Jewel butterfly (page 6, above), but even more serious is the fact that the areas of broad leaf tea-tree woodland on this land, which comply with the EPBC Endangered status, appear on Queensland mapping as regional ecosystem 7.3.8a and 7.3.8b bearing the conservation status "Least concern." This despite it having a biodiversity status of Endangered, and being simultaneously mapped as essential habitat for several endangered species, including the mahogany glider (and other fauna).

We urge the Commonwealth to work with State governments to ensure equivalent conservation status is accorded to species and ecosystems, wherever applicable.

2. Ensure that confusion or blurring of mapping, legislation and information is reduced to a minimum to avoid misinterpretation and to promote and encourage compliance. Increase action on non-compliance. If landholders are not meeting obligations under the legislation, the Department should take action. Tighten the language and increase the stringency of advice to landholders so that there is no doubt about the need to seek Departmental advice and fully comply.

3. Increase the transparency of DEE's Compliance Office and encourage greater readiness to share information and engage with environmental groups or individuals who clearly demonstrate genuine and well-founded concern.

IN CONCLUSION

The mahogany glider was doubtless known to, and co-existed with, the Aboriginal people of this stretch of coast for countless generations. But for non-indigenous Australians it was only 'discovered' and described a mere 33 years ago. We knew from the beginning that this animal had been robbed of so much of its habitat that losing more would place it at serious risk – yet we have allowed this to happen, and our environmental laws continue to allow this to happen, piece by piece. To have found this animal "on our watch" and to have come as close as we now are to losing it, on that same watch, is a damning indictment. For it is not through lack of ability that we are seeing species after species plunging towards extinction – it is our political will that has failed.

We have no more chances after this, we must act now.

Thank you for giving us the opportunity to make this submission. We wish the Committee well.

Yours sincerely,

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