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Committee Secretary
Senate Standing Committees on Environment and Communications
PO Box 6100
Parliament House
Canberra ACT 2600
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Dear Senator,

Bats and Trees Society of Cairns Inc Submission to the Senate Inquiry into Australia's faunal extinction crisis

The Bats and Trees Society of Cairns (BatSoc) Inc is pleased to have an opportunity to comment on the *2018* ***ABS Submission to the Parliamentary inquiry into Australia's faunal extinction crisis.***

BatSoc Inc is a new not-for-profit incorporated bat group in Far North Queensland with a particular focus on the Vulnerable Spectacled Flying-fox. Our aim is to engage the community and educate people in FNQ about the bats in this region, particularly the Spectacled flying-fox, and the vital roles bats play, to work towards resolution of conflict between humans and bats to enable people to live with bats.

We do this through education in schools and the community, through representation of and assistance to local wildlife care groups who work with microbats and flying-foxes, and through cooperation with landcare and other tree-planting community groups to create and improve roosting and foraging habitat quality.

We recognise the intrinsic value of all bat species in the region and their place in Australia's natural heritage, particularly their value to the World Heritage listed Wet Tropics rainforests, and their key ecological roles by contributing to biological diversity.

Bats comprise one quarter of Australia's mammal species, with around 80 species, more than half in the wet tropics. Ten species of insectivorous bats and three flying-foxes are listed as threatened under the EPBC Act (1999), and two are extinct, the Christmas Island Pipistrelle having become extinct only in August 2009. Another 14 species have been identified as near threatened (Woinarski et al. 2014). Four of species listed as Vulnerable and four Near Threatened species are found in Far North Queensland:

Vulnerable:

- *Hipposideros semoni* Semon's Leaf-nosed Bat, Greater Wart-nosed Horseshoe-bat
- *Macroderma gigas* Ghost Bat
- *Pteropus conspicillatus* Spectacled Flying-fox
- *Saccolaimus saccolaimus nudicluniatus* Bare-rumped Sheath-tailed Bat, Bare-rumped Sheathtail Bat

Near Threatened:

- Rhinolophus robertsi Greater Large-eared Horseshoe-bat
- Hipposideros diadema Diadem Leaf-nosed Bat
- Taphozous australis Coastal Sheath-tailed Bat
- Murina florium Flute-nosed Bat

This submission focuses on one of the listed species, the Vulnerable Spectacled flying-fox under each of the TOR for the inquiry. The Spectacled flying-fox is an excellent example of the failure of existing legislation in reversing a downward trend in population.

Flying-foxes are amongst the most mobile of Australian species, travelling long distances following foraging resources and roosting in a network of camps, many increasingly in urban centres and thus increasingly the subject of human- flying-fox conflict. Despite two species being listed as threatened, the Grey-headed flying-fox and the Spectacled flying-fox, all flying-foxes can legally be moved from urban camps, even nationally important camps, and as such can be subjected to harassment at roosting sites. In this, threatened flying-foxes are treated differently from other listed species.

TOR 1: **the ongoing decline in the population and conservation status of Australia's nearly 500 threatened fauna species**

The Australian mammal fauna has fared badly since European settlement; 29 Australian Mammals species, including three species of bats, have been made extinct in a little over 200 years (Woinarski et al. 2014), the latest, the Christmas Island Pipistrelle in 2009.

The Spectacled flying-fox is highly conservation dependent and is threatened by habitat loss and fragmentation, tick-paralysis, persecution and other human induced impacts including entanglement and collision (barbed wire, inappropriate fruit tree netting, electrocution), secondary poisoning with agricultural chemicals and climate change. The species has declined by 75% in 14 years, beginning in 2004 (Westcott et al 2018). ,The major contributor to this decline appears be cyclones, however, the lack of any population growth since 2013 and the detection of statistical signature of perturbations during the cooler months since 2013 suggest that additional pressures are currently acting to prevent population recovery (Westcott et al. 2018). This is most likely a lack of winter foraging resources which may be contributed to native vegetation clearing. The Spectacled flying-fox was nominated for uplisting under the EPBC Act from Vulnerable to Endangered in 2015 for a decision in March 2017. However, the Commonwealth Minister for Environment and Energy has deferred his decision three times, with the determination date now being January 2019.

To prevent further decline, BatSoc recommends that the Commonwealth and Queensland governments act together to dedicate resources to:

- **Review and implement the recovery plan for Spectacled flying-fox**
- **Develop a comprehensive community engagement and communication strategy about Spectacled flying-fox (and other flying-foxes) to increase awareness and appreciation of**

flying-foxes, reduce human- flying-fox conflict and increase support for flying-fox conservation

- **Implement actions to halt native vegetation clearing, especially of winter flowering species, research and conserve critical foraging habitat, and research, identify, conserve and protect critical roosting habitat**

TOR 2: **Wider ecological impact of faunal extinction**

The Spectacled flying-fox is a rainforest specialist restricted to tropical north-eastern Queensland. Within this range, it plays an important role in rainforest maintenance, revegetation and genetic diversity through long-and short distance seed dispersal and pollination, particularly of eucalypt forests surrounding tropical rainforests. Flying-foxes are highly mobile and commute an average distance of c. 10-20 km from their camp to foraging sites, utilising all parts of the landscape, urban, rural, rainforest and hardwood forests and woodland. (Westcott et al. 2015; Welbergen et al. unpubl. data). They use a network of roosting sites (camps), changing camps on a frequent basis, sometimes moving hundreds of kilometres between camps, and thousands of kilometres over periods of weeks and months.

The spectacled flying-fox is particularly valuable to maintaining genetic diversity of fragmented vegetation communities including World Heritage Wet Tropics as it only long-distance seed disperser that can feed in multiple rainforest patches in one night. This seed dispersal and pollination benefits a range of other faunal species. (DERM 2010).

TOR 3: International and domestic obligations Commonwealth Government in conserving threatened fauna;

The Commonwealth Government has international and domestic obligations to conserve the Spectacled flying-fox.

The spectacled flying fox is listed under Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). Populations of the spectacled flying fox are recognised as values of the Wet Tropics of Queensland World Heritage Area, a World Heritage property under the Convention Concerning the Protection of the World Cultural and Natural Heritage (World Heritage Convention). The World Heritage values of declared World Heritage properties are protected under the EPBC Act. *(DERM 2010)*)

TOR 4: Adequacy of Commonwealth environment laws, including but not limited to EPBC Act, in providing protections for threatened fauna and against threatening processes:

Flying-foxes are treated differently from other threatened species- critical roosting habitat (Nationally Important Camps) are not protected.

The EPBC Act has not adequately protected SFF. Foraging habitat (feeding trees) continue to be cleared throughout the range of spectacled flying-foxes in North-eastern Queensland. Spectacled flying-foxes (and Grey-headed flying-foxes) can still be legally dispersed from urban camps under national Referral Guidelines for management actions in grey-headed and spectacled flying-fox camps which allow "clearing some vegetation or other indirect impacts on nationally important camps that are carried out in accordance with mitigation standards) (for example- development of a hotel adjacent to such a camp) and "dispersal of nationally important camps that are carried out with the mitigation standards and are done when the ***national*** population is not subject to ***significant*** stress) without need for referral.

Despite listing as a threatened species under the EPBC Act, the Commonwealth Department of Environment and Energy has allowed continual successive removal of roost trees at the Cairns CBD nationally important camp. The department has also approved development of a hotel next to (in fact in the middle of) this nationally important camp resulting in over 1,100 abandoned and dead pups in one year from this one camp alone. Mitigation criteria were put in place during the construction stage, based on criteria used for dispersals. Observations by volunteers patrolling the camp to rescue injured and dropped animals noted that the use of crane appeared to result in behaviour that was not recognised as a trigger for stopping or modifying work practices. Instead of flying-foxes leaving the trees (30% of animals flying out was the trigger for recognising stress and disturbance) the flying-foxes "froze" or dropped lower in the trees similar to their behaviour when an aerial predator is directly above. It is believed that the construction, particularly the use of cranes, resulted in stress leading to vastly increased levels of abandonment (due to loss of lactation) and mortality of pups- see Appendix 1. Despite an investigation by the State department of environment and calls for a Commonwealth investigation, no changes were made to work practices as there was no legal proof that it was caused by construction work, despite there being no differences in other potential disturbance factors between this year and preceding years. A second hotel opposite the front of the Cairns city library was not even referred so had no mitigation requirements at all, leading to further stress on the flying-foxes in the camp, particularly during pile driving and crane use.

It should be noted, that neither the mitigation standards nor guidelines (nor Qld Code of Practice) give any definition of stress behaviours in flying-foxes. The Guidelines refer to Qld COP as achieving a similar outcome as mitigation standards listed on page 12 of the guidelines.

TOR 5: Adequacy and effectiveness of protections for critical habitat for threatened species under the Environment Protection and Biodiversity Conservation Act 1999;

The spectacled flying fox requires a continuous temporal sequence of productive foraging habitats and suitable roosting habitat (Westcott et al. 2001) Essential foraging habitat is not completely known, but they include drier forest adjacent to and within the foraging range of the species as well as rainforests. Camps provide essential roosting habitat but this had not been identified or defined at the time the Recovery Plan was produced. It could be argued that the Nationally Important Camps identified for SFF be considered critical roosting habitat so protection of Nationally Important Camp in Cairns (and others – see above) is woefully inadequate if 26 out of 37 roost trees in a nationally important camp can be removed over a period of four years, and if development is allowed within 50m of an important camp.

The Australasian Bat Society in it submission to the ***Inquiry into Environmental Offsets****, 26 June 2014, Submission 69*
http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Environment_and_Communications/Environmental_Offsets/Report/index, noted this as follows:

> We wish to draw your attention here to the issues surrounding flying-fox colonies. Both the spectacled flying-fox *Pteropus conspicillatus* and grey-headed flying-*fox Pteropus poliocephalus* are listed as Vulnerable under the EPBC Act and therefore should be given the same level of protection as other Vulnerable species. Flying-fox colonies have been subject to increasing pressure in recent years, reflected by the number of approved dispersals and incidents of shootings in commercial orchards. Camp disturbances are listed as a threat to these species. Yet in spite of these factors, offsets are not identified during the approval

process for colony dispersals, even though Commonwealth-funded research has identified sites suitable for habitat retention and tree planting that will provide alternative food sources to commercial fruit crops. Two examples of this follow.

1. Cairns Referral (2013/6937) dispersal of the spectacled flying-fox

The Cairns flying-fox camp was, with reference to the adopted recovery plan for spectacled flying-fox, classed as roosting habitat critical to the recovery of the species (Decision Makers Statement of Reasons, #25). However, the statement of reasons then goes on to state (#28) that dispersal actions would not adversely affect habitat critical to the survival of the species, which appears to be a complete contradiction. No offset was provided for the loss of the habitat on the basis that there was suitable habitat for the flying-foxes within 20 km.

2. Tepequar Drive, Maroochydore (2013/7007) dispersal of grey-headed flying-fox The Tepequar Drive camp was, with reference to the draft recovery plan for and grey-headed flying-fox, classed as roosting habitat critical to the recovery of the species (Decision Makers Statement of Reasons, #22). It was determined that no offset was required for the loss of habitat, as the area lost was not large enough to cause a significant impact, and that there was suitable habitat for the flying-foxes within 20 km.

These two cases, like many others, provide examples of a threatened species being excluded from critical habitat, with no offset being provided. There seems to be an attitude that wherever the bats settle, that will constitute their new habitat. However, given the scrutiny that flying-fox colonies are now subject to there is a real danger that colonies will be continually dispersed and habitat lost. Permanent habitat needs to be secured for these species as much as any other, and this habitat needs to be provided with the level of protection suitable for a nationally listed threatened species

TOR 6: the adequacy of the management and extent of the National Reserve System, stewardship arrangements, covenants and connectivity through wildlife corridors in conserving threatened fauna;

Due to the extreme mobility of flying-foxes and their utilisation of the whole of the landscape both within and outside protected areas, the Reserve system will not adequately conserve threatened flying-foxes. Stewardship arrangements and covenants for roosting habitat could be useful in conserving flying-fox camps (critical roosting habitat) although it should be noted that even when camps are in protected areas, wildlife reserves or corridors, they have been subject to dispersal in urban areas, and these dispersals, which most often fail (Roberts et al) have at times been paid for out of environmental levies. The National reserve System, private conservation reserves and wildlife corridors will assist in conservation of foraging resources for flying-foxes, but, as for most if not all bats, conservation of native vegetation on private lands farms, and other properties, , will be essential for flying-fox conservation.

TOR 7: the use of traditional knowledge and management for threatened species recovery and other outcomes as well as opportunities to expand the use of traditional knowledge and management for conservation;

BatSoc does not have the knowledge to comment on this.

TOR 8: Adequacy of existing funding streams for implementing threatened species recovery plans and preventing threatened fauna loss in general

The recovery plans for many species have not been written, or, if they have been written, the actions recommended in them are not implemented or given sufficient funding to effectively implement them.

This is true of the Spectacled flying-fox- The species was listed as Vulnerable in 2002 under the EPBC Act (1999), yet a recovery plan was not drafted until 2010 (DERM 2010). The Recovery plan has not been enacted and is currently outdated.

TOR 9: Adequacy of existing monitoring practices in relation to threatened fauna assessment and adaptive management responses

A national monitoring program for SFF (and GHFF) exists (CSIRO 2015), and clearly shows that SFF has declined in population. However, there has been no adaptive management response to prevent this decline. Instead as stated above, SFF can continue to be dispersed even from nationally important camps, vegetation at nationally important camps can be removed, and activities (eg construction works and inappropriate development) can occur near (within 50m) of nationally important camps. Deaths of over 450 animals in a year within the national population are considered to indicate a time of significant population stress – page 15 national guidelines. The death rate from Cairns CBD camp (15 Sept 2017 -1 May 2018) was over 700 ***from one camp alone***. (Many of the animals live at rescue subsequently died due to being too far gone)

It is recommended that the recovery plan is reviewed, updated and implemented.

TOR 10: adequacy of existing assessment processes for identifying threatened fauna conservation status;

Assessment processes for listing are good, however the processes for determining the decision is too susceptible to the Minister's wishes. The SFF was nominated to be uplisted from Vulnerable to Endangered in 2015, with a decision to be made in March 2017, but the Minister is able (and did) defer that decision for a period of up to five years. He has deferred 3 times so far, a decision is supposed to be given now in January 2019. In the meantime the species continues to decline and no adaptive management responses are taking place, and threatening processes are continuing. The Minister should not be allowed *not* to make a decision to list or uplist and should take the advice of the Threatened Species Advisory Committee.

TOR 11: Adequacy of existing compliance mechanisms for enforcing Commonwealth Law

The efficacy of measures implemented to mitigate impacts and risks to threatened fauna for specific proposals is not always clear. The processes for compliance and review of conditions of approval, required as a result of an environmental impact assessment (under the EPBC Act) are not clear.)

We refer you to the example of the unprecedented number of deaths and abandoned pups this latest 2017-2018 birthing and rearing season in the Cairns CBD nationally important camp.

While neither the Qld nor Commonwealth governments could find legal proof that construction activities were the cause of the unprecedented increase in rates of abandonment and mortality, the ecologists have clearly demonstrated, based on comparisons of figures from previous years, that

construction activities are the most likely cause and that current mitigation actions and criterion for ceasing work are not appropriate. Refer appendix 1.

General Recommendations:

That the government recognise that biodiversity loss is a significant threat to the sustainability of Australia and that this threat is comparable to and linked to climate change.

That the Government recognises that this is a complex issue and promotes understanding and education of the public and all elected representatives to facilitate action. This is particularly the case with our threatened flying-foxes, especially the Spectacled flying-fox. Community education and engagement, including in schools, is crucial to changing perceptions of and attudes toward flying-foxes and other bats to increase understanding, awareness and appreciation of bats and their ecosystem services and threats to promote a willingness for actions for conservation outcomes.

A New Generation of Environmental Laws as developed by Australian Panel of Experts on Environmental Law (APEEL) and proposed by the Places You Love (PYL) Alliance of environmental and community groups be introduced nationally to replace ineffective state laws and the EPBC Act.

Specific Recommendations for flying-foxes, particularly the Spectacled flying-fox

Review and implement the recovery plan for Spectacled flying-fox

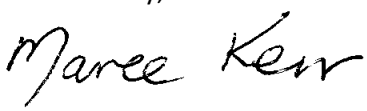
Develop a comprehensive community engagement and communication strategy about Spectacled flying-fox (and other flying-foxes) to increase awareness and appreciation of flying-foxes, reduce human- flying-fox conflict and increase support for flying-fox conservation

Implement actions to halt native vegetation clearing, especially of winter flowering species, research and conserve critical foraging habitat, and research, identify, conserve and protect critical roosting habitat.

Ensure that flying-fox camps are considered in planning legislation at all levels of government to ensure that 1) no negative impacts to flying-foxes or their permanent or seasonal camps occurs and 2) to reduce potential and existing conflict between humans and flying-foxes.

Implement the recommendations of 2016 Parliamentary Inquiry into flying-fox management in the eastern states.

Yours sincerely,



Maree Treadwell Kerr,
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Bats and Trees Society of Cairns Inc.

About Bats and Trees Society of Cairns Inc

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roles they play, to work towards resolution of conflict between humans and bats to enable people to live with bats.

We do this by carrying out education in schools and the community, through representation of and assistance to local wildlife care groups who work with microbats and flying-foxes, and through cooperation with landcare and other tree-planting community groups to create and improve roosting and foraging habitat quality.

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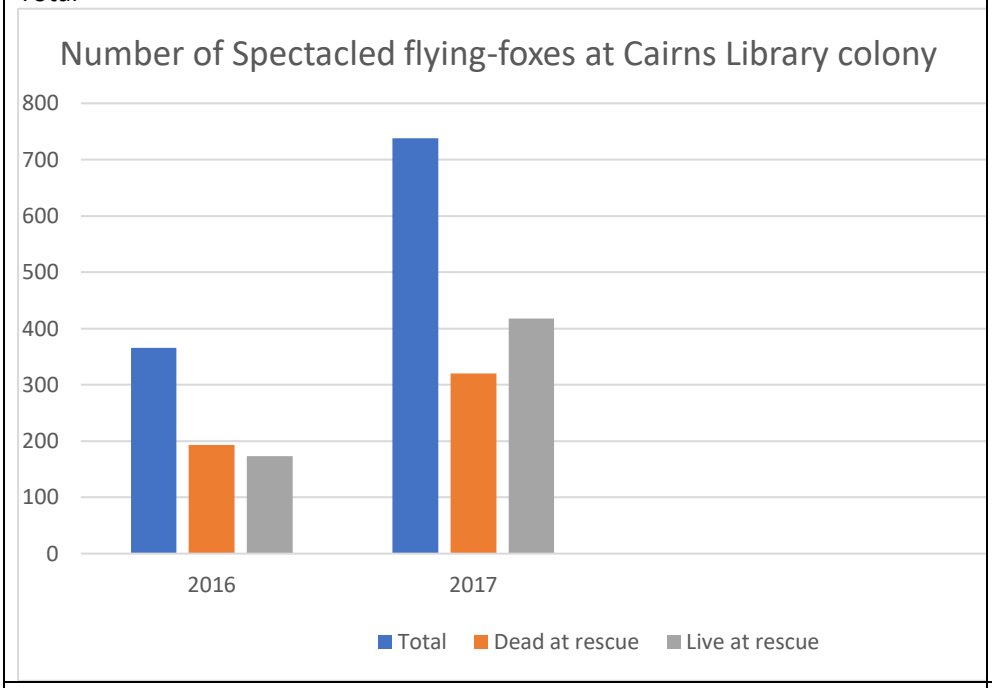
Woinarski, J. C., Burbidge, A. A. and P. L. Harrison (2014) *The Action Plan for Australian Mammals 2012*. CSIRO Publishing, Collingwood, Victoria.

Appendix 1: Bat Stats: Totals dead and live spectacled flying-fox pups from Cairns CBD camp
Comparison 2016 and 2017, September – December (Note: population 2016 was ~5,000 and in 2017, ~4000.)

Library colony 8 Sept –10 Dec	2016	2017
Total 	366	738
Dead at rescue	193	320
Live at rescue	173	418