

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

10 August 2018

Dear Sir/Madam

Please find below our comments to the Senate Inquiry into Australia's Faunal Extinction Crisis.

**Background about our Research Group**

We represent the Conservation Medicine Program in the School of Veterinary and Life Sciences at Murdoch University. Our research group has been studying the health, ecology and conservation management of threatened fauna for the past 17 years, undertaking 40+ research projects on threatened birds, mammals and reptiles across five Australian states and seven other countries, including developing research collaborations with over 50 partner organisations from government, industry and the community. Given our broad experience studying the conservation management of Australia's threatened fauna, we are strongly placed to comment on the adequacy of existing laws and other protections, funding, assessment processes and other issues for threatened species, to halt and reverse Australia's faunal extinction crisis.

Below, we identify key concerns and recommendations regarding Australia's management of threatened fauna. To demonstrate the validity of these concerns and recommendations, we refer to actual case studies of threatened species with which we are working. We argue that the concerns and recommendations presented below are readily extrapolated across the conservation management of all Australia's threatened species.

**Concern: State and federal legislation, actions and processes are not adequate to halt declines of threatened species towards extinction**

**Recommendation: Federal legislation and other actions regarding threatened species protection (funding; assessment processes; compliance) must be maintained and strengthened**

We illustrate this concern using the case of threatened black cockatoos. Our research group has been studying the health, ecology and conservation management of Western Australia's threatened black cockatoo species (Carnaby's cockatoo, Baudin's cockatoo and forest red-tailed black cockatoo; all MNES-status species) for almost 10 years. We have collaborative research ties with the state Department of Biodiversity, Conservation and Attractions, Perth Zoo, WA Museum, World Wildlife Fund, Birdlife Australia, industry groups including in the mining and housing sectors, and Kaarakin Black Cockatoo Conservation Centre. Our projects include health monitoring of Carnaby's cockatoo nestlings, disease screening of injured black cockatoos prior to rehabilitation back to the wild, and large-scale ecological research using satellite and GPS tracking of the species across their distribution ranges, to identify key habitat areas and movements; about which much remains unknown. Our research addresses major Actions and Objectives of the species' national Recovery Plans.

Through our research, we have observed that despite the efforts of Recovery Teams and research teams, as well as community groups fighting to save habitat and rehabilitate debilitated birds back to the wild, all three species remain in grave danger of continued and catastrophic population decline. This is particularly the case given that the human population of Western Australia is set to grow rapidly in the next few decades, with concurrent increasing risks to cockatoos from land clearing, vehicle strikes and other human-related threats. The biggest threat to these birds remains the clearing of their breeding, feeding and roosting habitat, which occurred throughout much of the last century and has appeared to have escalated in recent times, meaning that the populations of all three species are still in decline.

**Concern: State-level protections and assessment processes are weak, ineffective, and are failing to halt threatened species declines**

**Recommendation: Given state weaknesses, federal-level legislation, assessment processes, compliance mechanisms and funding must be maintained and strengthened**

It is at the federal level that Australia's threatened wildlife is being protected. State level legislation remains demonstrably ineffective at halting or reversing species declines. State-level development assessment processes continue to approve the loss of important habitat for threatened species, including species whose Recovery Plans specify that their continuing declines are due primarily to lack of habitat. For example, we recently reviewed an EPBC Act Referral to clear over 16ha of high quality Banksia woodland which was known foraging habitat for MNES species including Carnaby's cockatoos and forest red-tailed black cockatoos, and was rated by the development proponents as in 'Excellent to Very Good condition' with 'excellent biodiversity values'. This project had been assessed at the state level, and had been given state-level approval to proceed.

**Concern: Inaccuracies and omissions in EPBC Act Referrals mean they often do not identify the full impact of proposed actions on threatened species and MNES.**

**Recommendation: Improve assessment processes as appropriate to address this issue**

We have reviewed a number of recent Referrals under the EPBC Act for projects that involve clearing of black cockatoo habitat in Western Australia. In all Referrals that we have reviewed, the documents – including those produced by environmental consultants contracted by proponents – contained inaccuracies and omissions regarding black cockatoos' use of the site; meaning that in each case, the development would likely have impacts on important habitat for black cockatoos that were not acknowledged sufficiently in the Referral. Major inaccuracies and omissions that we have observed include: (1) failure to confirm that black cockatoos used a particular site, despite evidence available from standard sources to confirm that they do; (2) statements in Referrals that no evidence of foraging activity was observed at a site, based solely on a single / small number of site visits, and despite evidence available from various sources to show that the site in question is a key foraging area for black cockatoos; (3) statements in a Referral that black cockatoos have not been recorded breeding in a particular area in recent years, despite records of recent breeding available from standard sources. **Given the frequency of inaccuracies in Referrals we observed, this issue is widespread, and we note the role of these inaccuracies in concealing the full impact of proposed actions on threatened species.**

**Concern: The issue of Cumulative Impacts is largely ignored in legislation and assessment processes**

**Recommendation: Strengthen legislation and assessment processes to ensure Cumulative Impacts are formally recognised and managed as threats to threatened species**

We emphasise the importance of considering cumulative impacts when assessing potential impacts of development proposals and other land-modification actions on threatened species. For example, there are currently a large number of development actions and associated clearing of black cockatoo habitat on the Swan Coastal Plain, including many actions involving clearing of smaller areas of important habitat that do not individually meet the threshold for requiring referral or controlled action, but which together equate to potentially serious cumulative impacts.

We note that existing state laws and federal government Referrals processes do not adequately or effectively address the critical issue of cumulative impacts of the many small (often non-referred) actions on threatened black cockatoo populations. Cumulatively, these actions involve loss of extensive areas of foraging, breeding and/or corridor habitat used by black cockatoos. **Managing cumulative impacts is critical for recovery of most threatened Australian fauna; and ignoring the issue may interfere substantially with species recovery. This issue continues to be ignored (e.g. in state planning schemes and many Referral Guidelines/ Recovery Plans). The issue urgently requires the development of formal, effective avenues for consideration at federal level.**

For black cockatoos, and likely many threatened species, claims made during an assessment process that a proposed action will not have a significant impact or result in a decline may be far from substantiated, when considered as part of a cumulative impact. These are important points for threatened species population viability, and for development/ land modification applications and assessment processes. Regarding assessment processes, we recommend that all applications to modify threatened species habitat should be required to report on other proposed developments in the area/region or population's range, and the potential cumulative impacts. There should also be strategies in place to prevent development proponents from breaking proposed

development areas down into several smaller-area projects, which are individually too small to require referral, and which are submitted for approval consecutively to avoid assessment.

**Concern: Legislation, assessment processes and species Recovery Plans often do not adequately consider succession planning for threatened species habitat**

**Recommendation: Strengthen legislation, assessment processes and Recovery Plans to accommodate succession of important habitat**

We note that laws, plans and assessments currently may not adequately protect habitat that represents future habitat for threatened species. For Western Australia's black cockatoos for example, EPBC Act Referrals need to state whether an action is likely to have a significant impact on black cockatoo breeding habitat. Breeding habitat is defined as a known nesting tree: Referrals often describe the presence of potential nesting trees of appropriate species and diameter, often with existing hollows, but in the absence of evidence of current or previous use for breeding, they are able to state that the action will have no impact on breeding habitat.

We challenge the view that removal of trees which may not yet contain hollows used for breeding - but with the potential for viable hollows – has no impact on black cockatoo breeding habitat (especially where trees are already large, or already possess hollows). Rather, we note – particularly given the issue of cumulative impacts - that during assessment processes, each tree's potential to become a breeding tree in the medium-term should be considered. There is a major shortage of breeding trees for Western Australia's black cockatoos, and this has been identified in Recovery Plans as a key threat to persistence of these species (Department of Environment and Conservation 2007; Department of Environment and Conservation 2012). The referral guidelines for Western Australia's black cockatoos (2012) recommend maintaining the long-term supply of trees that have the potential to provide suitable *future* nest hollows, to support breeding over the medium/ long term. This requires identification and protection of trees that are potentially important for supporting cockatoo breeding in the future; particularly where cockatoos are being displaced from traditional breeding areas due to habitat clearing. ***The arguments in this section apply to many threatened species. Specifically, legislation, guidelines and assessment processes need to be strengthened to accommodate succession of important habitat - including protection of habitat that is likely to become important in the future.***

**Concern: Legislation, assessment processes and species Recovery Plans often do not adequately consider the importance of habitat patches for maintenance of habitat connectivity**

**Recommendation: Legislation, assessment processes and Recovery Plans must address habitat connectivity**

Another factor in the protection of threatened species which needs to be widely recognised and accommodated by authorities, legislation and assessment processes is the importance of habitat connectivity; particularly in highly fragmented landscapes. Threatened species often have home ranges containing many smaller foraging sites that together create a network of foraging sources. For example, in Western Australia, black cockatoos often reside in highly fragmented landscapes where the removal of even a few important trees can affect the connectivity of 'corridors' between foraging sites, thereby affecting foraging overall. For all threatened species, it is vital not to break but instead strengthen the connectivity of habitat networks.

**Concern: Proposed offsets and mitigations often involve actions with effects occurring too far in the future to mitigate the impacts of immediate loss of habitat**

**Recommendation: Assessment processes need to factor this risk into consideration**

We note that Referrals under the EPBC Act often contain proposed offsets and mitigations which proponents claim will mitigate the impact on habitat of threatened species. For example, a recent Referral for clearing of black cockatoo habitat proposed (1) offsets involving buying land containing pre-existing black cockatoo habitat and giving this to the state government for long-term retention, and (2) mitigation involving restoration of the site post-use, which they claimed "*will mitigate the impact on foraging habitat for Black Cockatoos*".

We strongly dispute such claims. Offsets and mitigations such as these will NOT effectively mitigate the loss of important black cockatoo habitat in either the short or medium term – and these time frames are the critical ones for black cockatoo population recovery. Specifically, (1) offsets that involve purchase of land which is *existing* habitat, to which black cockatoos already have access, will not compensate for loss of habitat. (2) Mitigation involving restoration of sites post-use involves a long lag time before vegetation is replanted and/or provides viable habitat. Critically, such restoration will not replace the loss of important foraging, roosting or breeding habitat in the short or medium term. Given the current extent of development involving clearing of

black cockatoo habitat in south-west Western Australia, retention of remaining important habitat is critical. We argue that retention of existing habitat, or restoration that involves delayed time until ecological benefit, are valuable in the long-term but are not sufficient in the immediate term; when black cockatoo numbers are continuing to decline due largely to lack of existing habitat and ongoing habitat loss.

Given that a lack of habitat is the main driver for the continued declines of Western Australia's black cockatoos (Department of Environment and Conservation 2007; Department of Environment and Conservation 2012), it is clearly necessary to retain habitat now. Clearing of additional quality habitat (whether collectively or cumulatively) is not consistent with the key objectives in the species' Recovery Plans. Further, given the predicted short timelines to extinction for Western Australia's black cockatoos if their declines are not halted soon, it is misleading to justify clearing of quality habitat by referring to offsets that comprise pre-existing habitat, or mitigations that only produce additional habitat in the long-term. Unless something is done to help the species recover now, any reference to "the long term" is meaningless for these black cockatoos. ***The arguments made in this section apply to many threatened species. Specifically: proposed offsets/mitigations often do not reduce the short and medium-term impacts on threatened species from loss of existing habitat. It is vital for state and federal legislation and assessment processes to recognise and address this issue.***

**Concern: Regional Forest Agreements are inadequate to protect threatened species and their habitat**

**Recommendation: Ensure federal-level oversight and assessment of all actions that could threaten species or population viability: such actions should always require federal-level assessment and approval**

Commonwealth laws and assessment processes to protect threatened fauna and their habitat against key threatening processes are currently ineffective in part because they cede authority and decision-making to Regional Forest Agreements (RFAs). RFAs are inadequate and ineffective at protecting species for a number of reasons: (1) RFAs are only updated every several years – and this gap between updates is too long for many endangered species. New threatening processes, increasing impacts from existing threats, and relevant research findings often emerge suddenly, and require government systems and processes that are not only rigorous but flexible and responsive, to accommodate new threats/findings immediately, without being hindered by outdated RFAs. (2) RFAs are developed, at least in some states, with strong political pressure from industry, and may not have provided adequate protections for threatened species from the outset. In many states, industry and politics are closely interlinked. Given these two points, the current approach of allowing states' forestry industries to undertake any action so long as it is consistent with the state's own RFA, exempt from federal oversight and assessment, is clearly a major additional risk for threatened species.

The lack of protection for critically endangered swift parrots in Tasmania illustrates the above concerns, with clearing of nesting habitat (a key threatening process) still occurring (e.g. the known nesting site at Tyler's Hill, end of 2017). Logging agencies' compliance and state-level oversight cannot be relied upon. Likewise, major threats to swift parrots in Tasmania from introduced sugar gliders is being poorly managed at the state level.

**Concern: Existing funding streams for implementing Recovery Plans, and funding to prevent threatened fauna loss in general (including funding for research) is extremely inadequate**

**Recommendation: Federal funding and actions to address the extinction crisis need to be greatly increased**

Lack of federal funding to prevent threatened fauna loss – including lack of funding to (a) implement Recovery Plans/ other direct actions, (b) undertake relevant research and implement its recommendations, and (c) address national/global threats (e.g. climate change) is perhaps the single greatest contributor to the faunal extinction crisis. Australian Research Council funding for faunal conservation research, always insufficient, has been slashed. Government-funded research centres are shut down or financially impoverished. University funding has been decimated, with federal governments pushing a business model for universities that impedes high quality, long-term research into threatened species conservation management (scarce funding; staff on short contracts; department budgets reduced regularly). This is the opposite of what threatened species need.

Our case study to illustrate this point involves our research into Western Australia's three threatened black cockatoo species (Carnaby's cockatoo, Baudin's cockatoo and forest red-tailed black cockatoo). Although Recovery Plans exist, many of the plans' objectives have not been implementable, due to knowledge gaps regarding the species' movements and habitat needs. Our ecological research – the first large-scale satellite and GPS tracking of flocks of all three species across their ranges - was designed specifically to collect sufficient information about key habitat to enable major Actions and Objectives of the Recovery Plans to be addressed.



Despite our research being the only option proposed for obtaining the missing information to implement Recovery Plan actions, our application for ARC funding was rejected. Prior to the federal government's slashing of ARC funding, our research group was often successful in applying for ARC funding for threatened species conservation research. Since the ARC funding reductions, our applications have been unsuccessful; and the likelihood of success is now so low that we (and other research teams we know) have given up applying. Extrapolated nationally across research groups with proven track records in high quality applied research into threatened species conservation management, this issue is critical and will harm threatened species recoveries.

With industry support we have implemented our research at a much smaller scale. Our research outputs and findings to date demonstrate the value of this research for the species' Recovery Plans, as well as for industry and local/state government decision making regarding land management (e.g. Figure 1), and national level EBPC Act Referral assessment processes and Referral Guidelines. Regarding the latter, our research has identified the significance of pine plantations as food sources for Western Australia's black cockatoos, and this new information has been provided to both the state government authorities and the draft Revised Referral Guidelines for the three species (in the absence of our findings, the Referral Guideline revisions had listed 'pine' as a habitat of least significance for black cockatoos). Given these demonstrated benefits from the smaller-scale study, the value of funding a larger-scale study is clear.



Figure 1. Example of use of our tracking data to indicate use of a proposed development site by black cockatoos. The image shows foraging movements for one of our transmitter birds, Carnaby's cockatoo #2216, and its flock across the site of a proposed mine (red polygon). Cockatoo #2216 was released in May 2016 with transmitters attached, joined a wild flock, and was tracked throughout 2016.

The benefits of undertaking research to identify key habitat requirements for threatened species are obvious. Development and conservation are not mutually exclusive: but research must be funded to identify important areas to be protected, as habitat for foraging, breeding, movement corridors and other critical species needs.

Thank you for the opportunity to comment on this Senate Inquiry. Please be in touch with any queries.

Yours sincerely,

A/Prof Kristin Warren BSc, BVMS (Hons), PhD, Dip ECZM (Wildlife Population Health)  
Associate Professor in Wildlife, Zoological and Conservation Medicine  
School of Veterinary and Life Sciences  
Murdoch University

Dr Jill Shephard  
Research Fellow – Black Cockatoo Ecology Project  
School of Veterinary and Life Sciences  
Murdoch University

References:

- 1.) Department of Environment and Conservation, 2007, Forest Black Cockatoo (*Baudin's Cockatoos Calyptorhynchus baudinii* and Forest Red-tailed Black Cockatoo *Calyptorhynchus banksii naso*) Recovery Plan 2007-2016, Perth, Western Australia.
- 2.) Department of Environment and Conservation. (2012) Carnaby's Cockatoo (*Calyptorhynchus latirostris*) Recovery Plan. (Perth, Western Australia).