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Professor Malcolm Wells
Chair
World Heritage Area Consultative Committee
C/- Parks & Wildlife Service
Department of Environment, Parks, Heritage and the Arts
GPO Box 1751
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5 February 2009

Dear Professor Wells and Committee members,

Briefing paper for the World Heritage Area Consultative Committee Meeting, Cradle Mountain, 27-28 February 2009: Superb Lyrebird and Fallow Deer – potential hazards to the Tasmanian Wilderness World Heritage Area

Thank you for putting this important issue on the agenda for the upcoming meeting of the World Heritage Area Consultative Committee (WHACC) and for providing the Tasmanian Conservation Trust (TCT) with an opportunity to prepare this briefing paper for the committee, so we could provide greater detail regarding our concerns and offer suggestions for progressing these issues.

General Comments

The TCT realises there may be a number of other feral species present in the World Heritage Area (WHA) that have a higher priority for control or eradication than fallow deer (*Dama dama*) and superb lyrebird (*Menura novaehollandiae*) and that resources for management of introduced species may be very limited. However, what we recommend in this paper is not costly and should not compete with or limit efforts to address other species. The TCT will be providing additional correspondence to the WHACC regarding management of other invasive species in the WHA and we will do what we can to increase the overall budget for this important area of WHA management.

We also realises that assessment of the abundance, distribution and likely impacts of the superb lyrebird in particular is far from complete. However, we believe it is prudent and timely to raise our concerns and make a number of recommendations for immediate action in anticipation that a major control program is needed.

In relation to both fallow deer and superb lyrebird, we will present relevant information from a range of authoritative sources including:
- *Tasmanian Wilderness World Heritage Area Management Plan 1999*;
- *State of the Tasmanian Wilderness World Heritage Area 2004*; and
- *Draft Management Plan 1999-2007 Update Tasmanian Wilderness World Heritage Area Table of Changes*.

While these documents provide evidence that deer and lyrebird are significant problems and action is required, a comparison of the recommendations regarding these two species shows a serious lack of urgency, strategic planning, resourcing and consistency of response. This may be limiting invasive species management in the WHA generally.

There is a worrying trend in these and other documents that it has taken far too long for formal acknowledgement that lyrebirds are a problem, too long for a formal response to be formulated and this response has not included establishment of appropriate monitoring programs or assessment of control options and feasibility.

Given the clear prescription in the TWWHAMP1999 to "Prevent the establishment of deer populations in the WHA", it seems to have taken a very long time to initiate the first and only thorough study of fallow deer in the WHA (completed in 2005), little evidence of active control within the WHA and reports and plans providing inconsistent or contradictory statements in relation to the need and feasibility of control.

General Recommendation

These problems indicate to us that the long promised Introduced Animal Management Strategy for the WHA is urgently needed and must be completed as a priority to enable key elements to be incorporated into the new WHA management plan. There may also be a need to look enhancing the expertise and resources available in the Department of Primary Industries and Water (DPIW) and the Parks and Wildlife Service (PWS) for carrying out risk assessments and preparing response strategies for invasive species generally.

Superb Lyrebird

Background information

The TWWHAMP1999 provides no specific recommendation regarding the superb lyrebird and only acknowledges their presence in the WHA (page87).

In 2000 Zoe Tanner published an honours thesis *Ecological Impacts of the Superb Lyrebird in Tasmania* that for the first time documents the likely impacts of this species.

The *State of the Tasmanian Wilderness World Heritage Area 2004* (STWWHA2004) makes the following statements regarding the suburb lyrebird:

> The existing introduced animals that are considered the highest threats to the natural ecology of the TWWHA are trout (both brown and rainbow), goats, rabbits, starlings, lyrebirds, European wasps and bumblebees. (Page 85)
>
> Lyrebirds (which were introduced to Tasmania from mainland Australia in the 1930's and 40's) have spread further into wet forests within the TWWHA and now occur in wet forest in the vicinity of Tarraleah and the King William Range as well as on the South Coast Track. Lyrebirds are considered likely to continue spreading in the future. Although there is no evidence they are directly threatening native species, lyrebirds may be changing the character of forests by reducing the amount of ground ferns and saplings (Tanner, 2000). (Page 90)
>
> Lyrebirds (Menura novaehollandiae) were originally introduced to Mt Field and Hastings Cave Scenic Reserve in the 1930s and 40s. Since then, they have spread to Meander in the north, Butlers Gorge in the west and South East Cape. Little is known about the impact of lyrebirds; however a recent study found that in areas where lyrebirds are present, there are less ferns and saplings. Lyrebirds are spreading throughout wet forests in Tasmania.
> Threat: medium (Page 92)

The superb lyrebird was discussed briefly at the Threatened Species Network conference *Feral Animals, Threatened Species and the Role of the Community* held in March 2005 and this resulted in national media interest on account of the novelty value of an Australian native animal being a feral animal. In the conference proceedings Driessen, Mallick and Seeman stated in their paper, *Introduced Animals of Tasmania and the Tasmanian Wilderness World Heritage Area*, that "The Superb Lyrebird is currently increasing its range in the TWWHA and is likely to occupy all suitable habitat in the near future".

Following this conference, in May 2005 the TCT wrote to the WHACC requesting the committee discus it's concerns regarding the possible impact of lyrebirds on the WHA. We never received a reply to our letter and we understand the issue was never discussed despite a subsequent reminder letter in July 2006.

In 2007 Sarah Tassell commenced a doctorate at the University of Tasmania titled *The impact of the superb lyrebird (Menura novaehollandiae) on Tasmanian forests ecosystems*. The University of Tasmania web site provides the following summary of her doctorate.

> The superb lyrebird was introduced to Tasmania in the 1930s and 40s in order to save the bird from the perceived threat of foxes and habitat loss on the mainland. However, there is growing concern that lyrebirds may pose a threat to Tasmanian forest ecosystems.

Lyrebirds feed on invertebrates by scratching over large amounts of leaf litter and soil. Their roles as a predator and as a bioturbating ecosystem engineer mean that lyrebirds are probably a keystone species in the forests they inhabit. Since there is no native equivalent to lyrebirds, Tasmanian flora and fauna may significantly affected by their activities.

General project aims:
1. To examine the impact that lyrebirds have on leaf litter and soil invertebrate communities both directly through predation and indirectly through changes to habitat brought about by foraging.
2. To determine whether bioturbation and damage to individual plants caused by foraging affects vegetation communities.
3. To establish the impact that foraging activity has on soil and leaf litter structure and function.

Supervisors;
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The DMPTWWHA2007 makes the following comment regarding the superb lyrebird.

Appendix 1.
2009 Issues (Significant Issues held over till the full review of the management plan in 2009)
Introduced Animals - Including lyrebirds, wasps, bumble bees – the extent of these threats and how best to deal with them will be assessed and, where appropriate, methods for their control will be covered in Introduced Animal Management Strategy. Core elements from the strategy will be examined for inclusion in the 2009 plan as appropriate.

Discussion

The information presented above shows the presence of lyrebirds in the WHA was known for quite a few years before their potential impact was reflected in formal plans and before serious efforts were made to determine the severity of their impacts. While these assessments have been under way there has been little effort to monitor or map the species and no assessment of possible management options.

While the superb lyrebird was largely ignored in the TWWHAMP1999, the publication of Zoe Tanner's honours thesis in 2000 documented for the first time the likely impacts this species was having in Tasmania.

It then took four years until the STWWHA2004 finally acknowledged the problem was serious, stating that "The existing introduced animals that are considered the highest

threats to the natural ecology of the TWWHA are trout (both brown and rainbow), goats, rabbits, starlings, lyrebirds, European wasps and bumblebees."

The STWWHA2004 appears contradictory by concluding that, of all the existing introduced animals present in the WHA, lyrebirds were among the "highest threats" to its ecology, but also claiming that "Although there is no evidence they are directly threatening native species, lyrebirds may be changing the character of forests by reducing the amount of ground ferns and saplings (Tanner 2000)."

Clearly there was significant concern about lyrebirds but no formal process for making a risk assessment and taking action in the absence of sufficient information.

We understand that concerned staff within PWS and the DPIW stimulated Sarah Tassell's interest in commencing a doctorate in 2007 on the impacts of lyrebirds in Tasmania. Sarah is scheduled to complete her doctorate at the end of 2009 and we understand she will contact the WHACC to request an opportunity to present preliminary results at the WHACC meeting in April or May 2009.

The DMPTWWHA2007 appears to only postpone any action. It states that the level of threat and response measures will be assessed and "where appropriate, methods for their control will be covered in Introduced Animal Management Strategy. Core elements from the strategy will be examined for inclusion in the 2009 plan as appropriate."

The TCT supports the preparation of a strategy for management of introduced species in the WHA, especially to ensure that control action is focused on the introduced species known to have the most serious impact or potential impact and to ensure these control actions are feasible and practical. However, the new management plan and the proposed Introduced Animal Management Strategy have been in preparation for several years (we first heard of the strategy in 2005). This strategy, including recommendations related to lyrebirds, must be developed without delay, incorporated into the new WHA management plan and implemented without delay.

Since Sarah Tassell's research is scheduled for completion at the end of 2009, it would be appropriate for the WHACC to immediately commence an assessment of the likely management responses, additional research needs and resource implications in anticipation that lyrebirds are found to have a significant impact on the WHA. Starting this process now will minimise the chances there is a period of in-action after completion of Sarah Tassell's work.

One additional issue that has not been reflected in any of the management plans and other documents reviewed by the TCT is that lyrebirds and other introduced animals detract from wilderness values merely by their presence. This issue must be looked at when determining the impacts on introduced species and prioritising control efforts.

Recommendations

1. The WHACC acknowledge that introduced species in the WHA, including lyrebirds, are a threat to wilderness values of the WHA merely by their presence and that wilderness values be considered in response strategies and prioritisations of all invasive species.

2. The WHACC support the establishment of a comprehensive monitoring and mapping program to determine the distribution and abundance of lyrebirds and encourage PWS and DPIW to source resources for this purpose. This program should be planned and implemented in collaboration with the University of Tasmania, recreational users of the WHA and key interest groups. The TCT would welcome an opportunity to assist in such a program.

3. The WHACC seek advice from a range of experts and land managers, including from the University of Tasmania and inter-state, in order to make a preliminary assessment of possible control options for superb lyrebird and feasibility and cost of control and eradication.

4. The WHACC seek advice to identify additional research requirements that may assist monitoring, mapping and control/eradication of lyrebirds.

Fallow Deer

Background information

The TWWHAMP99 contains a "Specific Prescription" to "Prevent the establishment of deer populations in the WHA" (page 89).

While not making any specific recommendation for action, the STWWHA2004 makes the following alarming statements regarding the deer species:

> There have also been reported attempts to introduce deer into natural areas of Tasmania. There is particular concern about the potential for the adaptable subspecies of the fallow deer—the Mesopotamia deer (Dama dama mesopotamica)—to become established. Other reported attempted introductions include the red deer (Cervus elaphus), the Sambar (Cervus unicolor), and attempts to relocate fallow deer (which are established in eastern Tasmania) to parts of western Tasmanian where they could become established. (Page 85)

The STWWHA2004 report says in a table under the heading "Active Management Program?" "yes, eradicate any incursions into the WHA" (page 87) but gives no further details of actual incursions or action taken.

The critical background information relevant to fallow deer is contained in the 2005 DPIW report "The *Distribution and Abundance of Fallow Deer in the Central Plateau Conservation Area and adjacent areas in Tasmania*. The report executive summary states that:

> Fallow deer (*Dama dama*) occur in the central highlands of Tasmania including areas that are adjacent to the World Heritage listed Central Plateau Conservation

Area (hereafter CPCA). Reports of fallow deer sightings made by recreational users of the reserve as well as observations made by Parks and Wildlife Service staff, Inland Fisheries Service staff and land managers suggest that fallow deer in these areas have increased in abundance and that they have expanded their range to include parts of the CPCA.

TCT is greatly concerned regarding the report's findings and supports the recommendations including:

1. A report register for fallow deer sightings be established and maintained by the Parks and Wildlife Service;
2. Surveys to be repeated in 3-5 years to measure any changes in distribution or abundance over time.

The draft minutes of the WHACC Meeting 76, 22-24 September 2005, includes a report on progress of the project mentioned above and makes the comment that "Eradication of deer is not feasible due to the presence of deer immediately outside the CPCA. If significant impacts are detected then local control could be implemented, but is likely to be costly."

The DMPTWWHA2007 makes no specific recommendation in relation to fallow deer. It is not known if the proposed Introduced Animal Management Strategy (mentioned in DMPTWWHA2007) includes more detailed recommendations regarding fallow deer.

Discussion

Given the clear prescription in the TWWHAMP1999 to "Prevent the establishment of deer populations in the WHA", it seems to have taken a very long time to initiate the first and only thorough study of fallow deer in the WHA (completed in 2005), little evidence that active control within the WHA has taken place and reports and plans providing inconsistent or contradictory statements.

We are greatly concerned about the alarming comments contained in the STWWHA2004 regarding the possible deliberate and illegal introduction into Tasmania of additional species of deer and attempts to introduce fallow deer into the western parts of Tasmania. While there may well have been significant efforts made to investigate and prevent such introductions, there is no mention of these issues in the DMPTWWHA2007 and we could find no other records of such actions.

The STWWHA2004 refers to there being an active management program that eradicated any incursions of fallow deer into the WHA, but there is no further detail provided about number of incursions, management responses and cost and effectiveness of the responses.

The comments made at the September 2005 WHACC Meeting that "Eradication of deer is not feasible due to the presence of deer immediately outside the CPCA" and "If significant impacts are detected then local control could be implemented, but is likely to be costly" seems at odds with the claim in the STWWHA2004 report that there is an active management program to eradicate any incursions and the TWWHAMP1999 recommendation to prevent the establishment of deer.

Apart from the possible misuse of the word eradicate in all of these documents, when control is the appropriate word, the 2007 WHACC meeting presents a far less assertive and committed position in relation to deer in the WHA than the TWWHAMP1999 requires. A fallow deer response strategy must be developed to present a clear and consistent approach.

We were disappointed to discover that the DMPTWWHA2007 makes no specific recommendation in relation to fallow deer. It is our firm view that a fallow deer response plan must prepared and implemented without delay, this plan be incorporated into the Introduced Animal Management Strategy and key recommendations of this be incorporated into the new WHA management plan.

Recommendations

1. That the WHACC acknowledge that the presence of introduced species in the WHA, including fallow deer, are a threat to wilderness values of the WHA merely by their presence and that wilderness values be considered in response strategies and prioritisations of all invasive species.

2. The TCT specifically request that the WHACC takes action to ensure that the DPIW report recommendations are implemented, including:
    - A report register for fallow deer sightings be established and maintained by the Parks and Wildlife Service;
    - Surveys to be repeated in 3-5 years to measure any changes in distribution or abundance over time.

    Note: in September 2009 it will be five years since the completion of this report.

3. Following the comments made in the STWWHA2004, the WHACC should request a full assessment of the potential for and likely impacts of fallow deer being deliberately introduced into western Tasmania, including the WHA, and other deer species being introduced into Tasmania and spreading into the WHA.

4. The WHACC should request that a fallow deer response plan be prepared and implemented without delay and this plan be incorporated into the Introduced Animal Management Strategy for the WHA. The Introduced Animal Management Strategy must be finalised without delay in order that key recommendations be incorporated into the new WHA management plan.

5. Until a response strategy is completed, the WHACC must ensure that appropriate management actions to control fallow deer are taken by the PWS, DPIW and other relevant agencies and private land owners in order to implement the goal included in the *Tasmanian Wilderness World Heritage Area Management Plan 1999* "Prevent the establishment of deer populations in the WHA"

Yours sincerely,

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