

SoS Draft Priority Action Statements

Comments by B. Law

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Vespadelus troughtoni

Conduct targeted research into the species' biology, particularly where it can aid in the recovery of the species

Add... "e.g. determining the effectiveness of corridors for the species recovery". Note there is no current evidence that corridors are beneficial to this species and so investing in corridors may lead to a waste of resources in this case (See Law et al. 2005). However, it is likely that retaining and restoring linear habitat along creek lines would be beneficial to the species (Law et al. 2005). This is a subtle difference from planting corridors that may or may not include creek-lines.

Mormopterus norfolkensis

Raise public awareness of the damage caused to habitat by thinning, slashing, underscrubbing and inappropriate grazing. Encourage land managers to retain tree density and a floristically and structurally diverse and spatially variable mid and understorey

This species avoids dense forest and is most likely to forage along vegetation edges, scattered trees and open woodland. The emphasis of this action would be better focused on weed management to remove dense stands of weedy vegetation in its habitat, especially riparian zones. Also, there is growing evidence that sensitive forest thinning can benefit insectivorous bats (e.g. Law, Park and Lacki 2016 plus other studies of our group in River Red Gums and Cypress). Including thinning in the statement above sends the wrong message to people. Instead of tree density, it would be better to say "hollow tree density" as this is likely to be beneficial to the species, whereas high tree density good be detrimental (See references by McConville).

It would have been good to see an action outlining a focus on remnant vegetation, which this species uses extensively. Eg "sensitive management and restoration of remnant vegetation on farmland, especially in productive landscapes".

Raise awareness amongst landholders in close proximity (approximately 15km radius) to maternity or roost sites, of the potential impacts of using harmful pesticides and other chemicals and discourage their use in or adjacent to foraging habitat particularly in riparian zones around waterways such as wetlands, swamps, estuaries, rivers, creeks, lakes and dams. Monitor and maintain adequate water quality in water systems known to be used for foraging.

Generally people will not be aware of where maternity roosts are for hollow-roosting bats and so this statement is fairly meaningless. Better to say raise awareness in close proximity to known high quality habitat.....(see McConville refs for models of habitat quality).

Ensure that areas within a 100m buffer of maternity caves are excluded from burning, and burning in these areas should not take place during breeding

This species roosts in tree hollows not caves.

Why does this species not have a research action like *V. troughtoni*? It seems rather inconsistent. E.g. Research to understand why the species avoids urban areas and associated bushland. I would suggest this is very important given urbanisation is likely to be one of the biggest threats to this species.

Pseudomys oralis

Conduct targeted survey for the species at sites where there has been little recent survey and where there has been no disturbance from fire, grazing or forestry for more than 20-30 years (e.g. Werrikimbe National Park, Timbarra, Gibraltar Range), to better understand long-term population persistence and response to disturbance. Ensure that very high trap hygiene standards are maintained to avoid any bias due to trap avoidance. Incorporate into survey design the ability to evaluate any effects of competitive displacement by bush rats *Rattus fuscipes*.

A worthy action, although I have just submitted a manuscript outlining research that largely addressed this aim. I.e. resurveys of undisturbed and disturbed forests, focusing on forestry up to 20-25 years). We also considered competition from bush rats. Given our research on forestry, perhaps this action would be better if it really emphasised lack of disturbance over longer time frames (30-50 years). It would also be good to see fire given more emphasis here and the need to increase our knowledge of the species response to fire, although I see another action partly deals with this issue. Although no specific research, only data review is listed in that action.

Liaise with land managers undertaking forestry activity in areas where the species is known to occur to encourage the retention of coarse woody debris (e.g. head and butt residue) following harvesting.

Should this be “liaise” or “regulate”? Currently it sounds a bit weak.