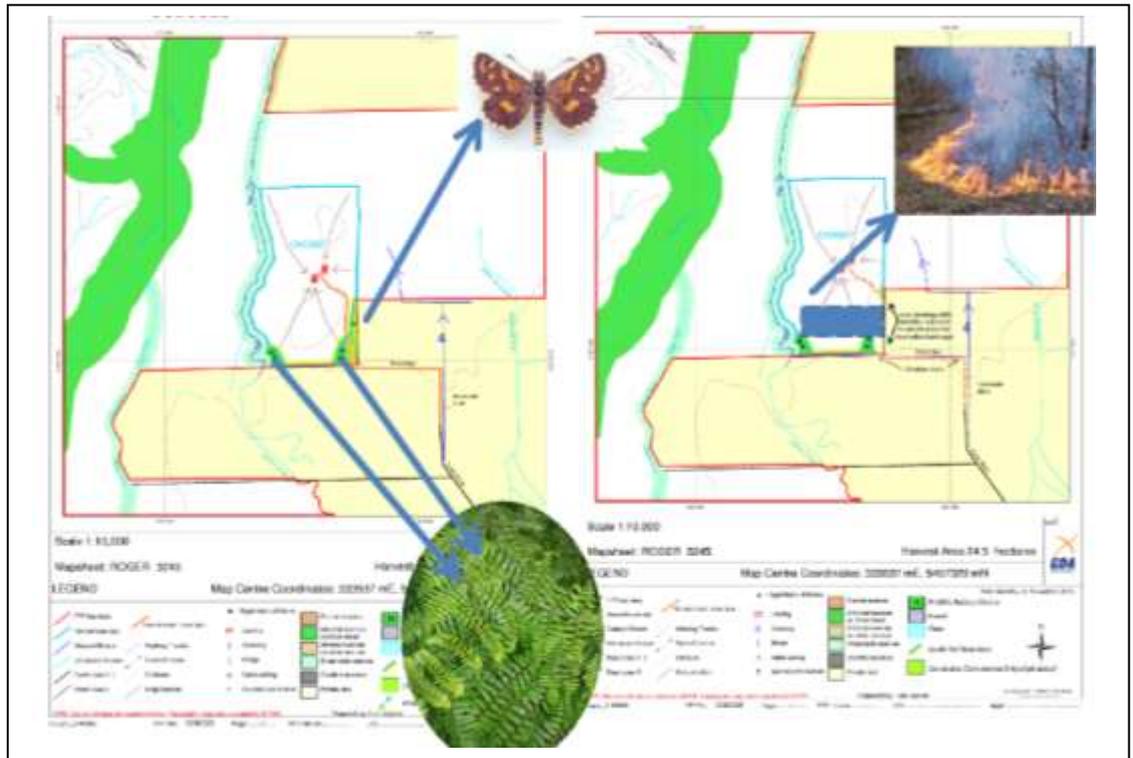


Procedures for the management of threatened species under the forest practices system: Report on implementation during 2013–14



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Report to the Board of the FPA and the Secretary of DPIPW

September 2014

Front page photograph: Management of an endangered fern, *Hypolepis distans*, and habitat (*Carex appressa*) for the Marrawah skipper in a proposed coupe in the northwest of the state. The planner found a single Marrawah skipper shelter in her coupe survey, as part of the biodiversity evaluation process, amongst a swathe of *Carex appressa*. This was a major range extension for the species (Dydee Mann).

Citation

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Summary

- The *Agreed Procedures* are the mechanism by which the requirements for the management of threatened species under the *Threatened Species Protection Act 1995* and the *Forest Practices Code* are delivered through the Tasmanian forest practices system.
- Clause 9 of the *Agreed procedures* requires an annual report of implementation of the *Agreed Procedures*. This report covers the 2013–14 period.
- The *Agreed Procedures* (in particular clause (B)4.3) were revised in 2013/14 to ensure they are consistent with the intent of the *Tasmanian Forests Agreement Act 2013*.
- DPIPWE and FPA collaborated on the completion of planning tools and field days on the identification and management of habitat for the Tasmanian devil, spotted-tailed quoll and grey goshawk.
- DPIPWE finalised listing statements and drafted new listing statements in 2013/14 and maintained locality data delivered via the Natural Values Atlas and updated the TSLink.
- The RFA priority species project is now completed and information on the main outputs (swift parrot strategic plan and the Biodiversity landscape planning guideline) are available via the project page on the [DPIPWE web-page](#) and [FPA web-site](#).
- FPA maintained existing planning tools, including minor updates to clarify habitat descriptions and range boundaries and carried out briefings for FPOs and others on the revised Threatened Fauna Adviser (ThFA). Six technical notes relating to threatened species management were drafted.
- FPA provided advice on management actions for threatened species for 185 notifications of proposed FPPs in 2013–14. The majority of advice requests were for the management of habitat for the masked owl, wedge-tailed eagles, swift parrot, grey goshawk, spotted-tailed quoll and devil.
- Two proposed FPPs relating to the management of swift parrot habitat for a private land conversion proposal and a state forest clearfell, burn and sow operation were referred to PCAB, DPIPWE.
- Of the 55 investigations that were completed by the FPA compliance program in 2013/14 there were two relating to threatened species, both related to partial harvesting on private property without a plan in threatened native vegetation and masked owl and swift parrot habitat.
- A report on the implementation of strategic landscape-scale recommendations (delivered through the 2002 ThrFA) for the management of habitat in the Moorina forest block found that these these ‘strategic’ recommendations have been largely met.
- DPIPWE and FPA have been involved in a number of research and monitoring projects in 2013/14 that relate to threatened species management (swift parrot, keeled snail, wedge-tailed eagle, management of mature forest habitats) in areas covered by the forest practices system. These studies provide information that can be used to assess the effectiveness of the threatened species management recommendations. The reports and publications from these studies are available via the FPA web-site.

Background

The *Agreed Procedures* are the mechanism by which the requirements for the management of threatened species under the *Threatened Species Protection Act 1995* and the *Forest Practices Code* are delivered through the Tasmanian forest practices system (Section D3.3 of the *Forest Practices Code*). These *Agreed Procedures* were introduced in 2000 and incorporated into the *Forest Practices Code (2000)*. They were revised by DPIPWE and the FPA in 2010 and again in 2014 to be consistent with changes to legislation and policy.

Clause 9 of the *Agreed procedures* requires an annual report of implementation of the *Agreed Procedures*. Two previous reports cover the 2011/12 and 2012/13 financial years. This document provides a summary of the activities that relate to each clause in Part A of the *Agreed Procedures* for 2013/14. It contributes to meeting recommendation 16 of the second five-yearly review of progress with implementation of the Tasmanian Regional Forest Agreement (Ramsey, 2008).

Report on implementation

Roles and responsibilities

Joint roles and responsibilities of the FPA and the DPIPWE

- a. *The Forest Practices Authority (FPA) and the Department of Primary Industries, Parks, Water and Environment (DPIPWE) will cooperate on the development of procedures, tools, objectives, endorsed management prescriptions and training for the management of threatened species within forests and/or threatened non-forest vegetation types at both the strategic (landscape) level and at the operational (forest practices plan) level.*
- The revisions to the Threatened Fauna Adviser were endorsed in accordance with clause (B)3.3 of the *Agreed Procedures* in April 2014. This new updated version of the Threatened Fauna Adviser (ThFA) can be referred to as the Threatened Fauna Adviser 2014, and supersedes the TFA 2002 version. This decision support tool which delivers recommended actions for listed fauna species, agreed with DPIPWE, can be accessed via the FPA website at http://www.fpa.tas.gov.au/fpa_services/planning_assistance/advisory_planning_tools/tfa
 - FPA Biodiversity program staff and staff from the Threatened Species and Marine Section of DPIPWE continued to collaborate on the clarification of the recommended actions delivered through the Threatened Fauna Adviser in response to feedback from planners.
 - The FPA Biodiversity program and Threatened Species and Marine Section of DPIPWE collaborated in the running of Tasmanian devil, quoll and goshawk field days in the NW, NE and SE in August 2013. These training events were designed for forest practitioners, in particular Forest Practices Officers and others involved in the preparation of forest practices plans, who needed to identify goshawk nests, devil and quoll habitat (including dens and nesting areas). There was a particular focus on identifying denning and nesting areas, and survey methods to identify the occurrence of these cryptic animals. 57 participants attended (33 private & 24 public) in total.
 - The FPA Biodiversity program manager and the manager of the Threatened Species and Marine Section of DPIPWE continued to collaborate on the RFA priority species project funded through the Commonwealth, Caring for Our Country program. A presentation on the [*Biodiversity landscape planning guideline*](#) was given by Dr A Koch at the Australian Bureau of

Agricultural and Resource Economics and Sciences (ABARES) Regional Outlook conference, Launceston. FPA staff commenced worked with staff from the Sustainability Section of Forestry Tasmania and district staff to develop internal state forest planning and reporting tools to facilitate the implementation of the [Biodiversity landscape planning guideline](#) on state forest.

- Staff from the FPA and TS&MS of DPIPWE continued to collaborate on the revision of range boundaries and habitat descriptions for threatened species delivered through the Natural Values Atlas and FPAs Biodiversity Values Database.
- The FPA and the DPIPWE collaborated on the revision of the *Agreed Procedures* (in particular clause (B)4.3) to ensure that outcomes are consistent with the intent of the *Tasmanian Forests Agreement Act 2013*, including requirements for the FPA to take explicit account of socio-economic factors and the wood supply obligations of Forestry Tasmania. Clause (B)4.3 makes explicit reference to the application of the duty of care thresholds under the Code and to a flow diagram was included as an attachment to the *Agreed Procedures* that diagrammatically summarises the process for the application of the duty of care thresholds.
- Work started on the development of a *Threatened Flora Adviser* in 2013–14. There are approximately 500 vascular flora species listed on the *Tasmanian Threatened Species Protection Act 1995*. Species are listed as rare, vulnerable or endangered depending on a number of factors such as population numbers, extent of distribution across Tasmania and risk of extinction. Under section D3.3 of the *Forest Practices Code* threatened species must be taken into account within areas covered by the Tasmanian forest practices system. Conservation management of threatened flora species is currently achieved on a case by case basis and is heavily reliant on expert opinion from Forest Practices Authority ecologists, often in consultation with species specialists (e.g. DPIPWE, UTAS, consultants). Similar to the ThFA, the first step in the development of the threatened flora adviser involves an extensive review of existing knowledge. The planning tool will be web-based and designed to deliver information and consistent advice to forest planners, to streamline planning and management of threatened flora species. It will target areas and/or species of high priority for conservation management. A project steering committee involving FPA and DPIPWE specialists and practitioners has been established to oversee this project.

b. The FPA and the DPIPWE will liaise on any cases that may lead to applications under Part 5 (Conservation Covenants) of the Nature Conservation Act 2002 relating to the refusal or amendment of applications for forest practices plans for the purpose of protecting a threatened species. Where such cases proceed to a tribunal, the FPA and the DPIPWE will cooperate in providing evidence to the tribunal.

- There were no cases in 2013–14.
- FPA staff continued provided advice to DPIPWE on compensation claim issues that have arisen from past FPP refusals.

Primary roles and responsibilities of the DPIPWE

c. Developing strategic plans and other strategic instruments for the management of threatened species as prescribed in legislation, plans and policies for which the department is responsible.

- TS&MS prepared listing statements for 11 fauna species and 18 flora species during 2013-14, including three for forest Boronia species, five for forest Epacris species and one for *Caladenia caudata*. A further 5 await final sign off, with a number in draft form. Updates

were made by DPIPWE to the Threatened Species Link, with a new tool launched to support threatened species surveys.

- The RFA priority species project is now completed and information on the main outputs (swift parrot strategic plan and the Biodiversity landscape planning guideline) are available via the project page on the [DPIPWE web-page](#) and [FPA web-site](#).
 - The Threatened species scientific advisory committee has made recommendations to the Minister to delist seven flora species including *Arthropodium strictum*, *Cynoglossum australe*, *Ranunculus sessiliflorus var. sessiliflorus* and *Senecio velleioides*.
 - A draft orchid recovery plan was completed and is now available for public comment.
- d. *Co-ordinating and participating in research and monitoring of the impacts of land use activities and other factors on the maintenance of habitat and populations of threatened species.*
- Staff from the Threatened Species and Marine Section and broader DPIPWE undertook habitat and/or population monitoring for the following RFA priority species: Tasmanian devil, swift parrot, Miena jewel beetle, orange-bellied parrot, forty-spotted pardalote, and a large number of threatened flora species (to varying degrees) in 2012-13. Note that some of this monitoring was carried out on a voluntary basis.

Primary roles and responsibilities of the FPA

- a. *Organising and coordinating training in threatened species and the use of the planning tools for Forest Practices Officers and others involved in the forest practices plan (FPP) planning process.*
- Training undertaken by FPA staff relating to threatened species management in areas covered by the forest practices system included –
 - briefings for NGOs on management of threatened species through the FP system
 - forest Practices Officer briefings (2) on the revised Threatened Fauna Adviser and other changes to planning tools
 - presentation at DPIPWE (all of agency and PCAB) on management of biodiversity values (including threatened fauna) through the forest practices system
 - Quoll, devil and goshawk habitat field day, three one day field days in NE, NW and SE. All planners and other natural resource managers, August 2013
 - field day with Norske-skog on the devil and quoll management prescription in a plantation context in southern Tasmania.
 - Many of the management recommendations delivered through the ThFA refer the planner to Technical Notes for further guidance or information. Time was spent by FPA staff, with input from TS&MS staff on development of these Technical Notes and making them available to planners in 2013–14.
 - a technical note on the use of the potential eagle nesting habitat model was developed, endorsed and is now available via the web-page
 - a technical notes on identifying Tasmanian devil and spotted-tailed quoll habitat was endorsed and is now available via the web-page
 - the technical note clarifying the management approach for wedge-tailed eagle nests was reviewed and submitted to the Board of the FPA and the Secretary of DPIPWE for endorsement

- technical notes on identifying habitat for the swift parrot and giant freshwater crayfish were finalised and submitted Board of the FPA and the Secretary of DPIPW for endorsement
- b. *Assessing notifications lodged as part of the FPP planning process as required to ensure that the planned operations are in accordance with the requirements of the Forest Practices Code and associated planning procedures.*
- 185 requests for advice on biodiversity issues from Forest Practices Officers and other forest planners as part of the FPP development process between 1 July 2013 and 30 June 2014. Of these, 114 were on state forest, with the remainder a mix of private operations. The data in the notification database indicates that field assessments were undertaken for about 16 per cent of notifications. However, this is an underestimate because some involved multiple visits and in some cases the pre-plan visits were not recorded.
 - The FPA compliance program assessed 50 FPPs (approximately 10% of all FPPs) covering the full range of forest operations in 2013–14 as part of the annual compliance audit. The results of this audit are in Appendix 3 of the FPA annual report.
- c. *Developing and providing site-specific management advice for forest practices plans where the planned operations are not covered by endorsed management prescriptions. This may involve consultation with relevant specialists within the DPIPW and other organisations where specific expertise is required.*
- As indicated in (b) FPA Biodiversity Program staff processed 185 requests for advice on biodiversity issues from Forest Practices Officers and other forest planners as part of the FPP development process between 1 July 2013 and 30 June 2014. DPIPW specialists and specialists from the University and Inland Fisheries Service were consulted when specific expertise was required.
 - Tables 1 and 2 provide the number of requests for advice for threatened flora and fauna species, respectively. As in 2012/13, a large proportion of biodiversity evaluations done as part of the development of a Forest Practices Plan resulted in requests for advice on management actions (notifications to the FPA). This was primarily because of delays in the endorsement of the revised Threatened Fauna Adviser. Therefore, advice on management actions for threatened species was generally delivered on a case by case basis, based on best available information, by staff of the FPA in 2013–14. However, it is expected that the number of requests will reduce in 2014/15 now that the revised Threatened Fauna Adviser has been released.
 - As in 2012/13 the highest number of requests for advice were for management issues relating to the grey goshawk, wedge-tailed eagle, swift parrot, spotted-tailed quoll, Tasmanian devil and masked owl. Requests for advice on the giant freshwater crayfish increased in 2013/14, possibly as a result of loss of trained planners. A field day is planned in 2014/15 to train new planners.
 - 67 out of the 182 (37%) requests for advice (for which there was data) were for clearfelling native forest operations. A large number of the requests were also for clearfelling and replanting of hardwood plantation operations (17%) and clearing of native forest or plantation for pasture (17%) (Table 3).
 - In 2013/14 the FPA formally advised DPIPW of two FPPs (one for PTPZL and one for private forest) because the duty of care thresholds, and any voluntary contribution negotiated, was not considered to fully meet the desired conservation outcomes for the species within the area covered by the FPP.

Table 1. Number of requests for advice for threatened flora species (Note that 156 notifications had no data).

Flora	Notifications
<i>Acacia axillaris</i> - midlands wattle	2
<i>Acacia pataczekii</i> - wallys wattle	3
<i>Acacia siculiformis</i> - dagger wattle	1
<i>Aphelia gracilis</i> - slender fanwort	1
<i>Aphelia pumilio</i> - dwarf fanwort	1
<i>Arthropodium strictum</i> - chocolate lily	2
<i>Asperula scoparia</i> subsp. <i>scoparia</i> - prickly woodruff	2
<i>Austrostipa bigeniculata</i> - doublejointed speargrass	1
<i>Austrostipa scabra</i> - rough speargrass	1
<i>Bolboschoenus caldwellii</i> - sea clubsedge	1
<i>Brunonia australis</i> - blue pincushion	1
<i>Caladenia anthracina</i> - blacktip spider-orchid	1
<i>Caladenia caudata</i> - tailed spider-orchid	1
<i>Caladenia patersonii</i> - patersons spider-orchid	1
<i>Caladenia pusilla</i> - tiny fingers	1
<i>Carex gunniana</i> - mountain sedge	1
<i>Colobanthus curtisiae</i> - grassland cupflower	1
<i>Cynoglossum australe</i> - coast houndstongue	2
<i>Epacris virgata</i> - pretty heath	3
<i>Glycine latrobeana</i> - clover glycine	1
<i>Glycine microphylla</i> - small-leaf glycine	1
<i>Gyrostemon thesioides</i> - broom wheelfruit	1
<i>Haloragis heterophylla</i> - variable raspwort	2
<i>Hypolepis distans</i> - scrambling groundfern	1
<i>Hypoxis vaginata</i> - sheathing yellowstar	2
<i>Juncus amabilis</i> - gentle rush	1
<i>Lachnagrostis scabra</i> subsp. <i>scabra</i> - rough blowgrass	1
<i>Monotoca submutica</i> var. <i>autumnalis</i> - roundleaf broomheath	1
<i>Plantago gaudichaudii</i> - narrow plantain	1
<i>Pomaderris intermedia</i> - lemon dogwood	1
<i>Prasophyllum stellatum</i> - ben lomond leek-orchid	1
<i>Pterostylis atriola</i> - snug greenhood	1
<i>Pterostylis commutata</i> - midland greenhood	1
<i>Pterostylis grandiflora</i> - superb greenhood	2
<i>Pultenaea mollis</i> - soft bushpea	1
<i>Pultenaea prostrata</i> - silky bushpea	2
<i>Ranunculus sessiliflorus</i> var. <i>sessiliflorus</i> - rockplate buttercup	1
<i>Scleranthus fasciculatus</i> - spreading knawel	2
<i>Senecio squarrosus</i> - leafy fireweed	1
<i>Siloxerus multiflorus</i> - small wrinklewort	1
<i>Teucrium corymbosum</i> - forest germander	1
<i>Thismia rodwayi</i> - fairy lanterns	2
<i>Veronica plebeia</i> - trailing speedwell	1
<i>Westringia angustifolia</i> - narrowleaf westringia	1

Table 2. Number of requests for advice for threatened fauna species (Note that 81 notifications had no data).

Fauna	Notifications
<i>Acanthiza pusilla archibaldi</i> - Brown Thornbill (King Island)	1
<i>Accipiter novaehollandiae</i> - Grey Goshawk	20
<i>Anoglypta launcestonensis</i> - Northeast Forest Snail	1
<i>Antipodia chaostola</i> - Chaostola Skipper	1
<i>Aquila audax fleayi</i> - Wedge-tailed Eagle	33
<i>Astacopsis gouldi</i> - Giant Freshwater Crayfish	12
<i>Beddomeia angulata</i> - Hydrobiid Snail (Rabid River)	1
<i>Beddomeia briansmithi</i> - Hydrobiid Snail (Fern Creek)	3
<i>Beddomeia lodderae</i> - Hydrobiid Snail (Upper Castra Rivulet)	1
<i>Beddomeia minima</i> - Hydrobiid Snail (Scottsdale)	2
<i>Beddomeia topsiae</i> - Hydrobiid Snail (Williamson Creek)	1
<i>Beddomeia turnerae</i> - Hydrobiid Snail (Minnow River)	1
<i>Catadromus lacordairei</i> - Green-lined ground beetle	4
Cave-dwelling invertebrates -	1
<i>Charopidae Skemps</i> - Skemps Snail	2
<i>Dasyurotaenia robusta</i> - Tapeworm (Tasmanian Devil)	1
<i>Dasyurus maculatus maculatus</i> - Spotted-tail Quoll	31
<i>Dasyurus viverrinus</i> - Eastern quoll	7
<i>Engaeus granulatus</i> - Central North burrowing crayfish	1
<i>Engaeus orramakunna</i> - Mt. Arthur Burrowing Crayfish	3
<i>Engaeus spinicaudatus</i> - Scottsdale Burrowing Crayfish	1
<i>Galaxias fontanus</i> - Swan Galaxias	1
<i>Galaxiella pusilla</i> - Dwarf Galaxias	4
<i>Haliaeetus leucogaster</i> - White-bellied Sea-Eagle	14
<i>Hoplogonus simsoni</i> - Simson's Stag Beetle	2
<i>Hoplogonus vanderschoori</i> - Vanderschoor's Stag Beetle	2
<i>Lathamus discolor</i> - Swift Parrot	25
<i>Limnodynastes peroni</i> - Striped Marsh Frog	2
<i>Lissotes menalcas</i> - Mt. Mangana Stag Beetle	5
<i>Litoria raniformis</i> - Green and Golden Frog	7
<i>Oreisplanus munionga larana</i> - Marrawah Skipper	2
<i>Oreixenica ptunarra</i> - Ptunarra Brown Butterfly	1
<i>Orphninostrichia maculata</i> - Caddis Fly (Wedge River)	1
<i>Pardalotus quadragintus</i> - Forty-spotted Pardalote	3
<i>Perameles gunnii gunnii</i> - Eastern-barred bandicoot	15
<i>Phrantela pupiformis</i> - Hydrobiid Snail (Tyenna River)	2
<i>Prototroctes maraena</i> - Australian Grayling	5
<i>Pseudemoia pagenstecheri</i> - Tussock Skink	5
<i>Sarcophilus harisii</i> - Tasmanian devil	40
<i>Tasmanipatus barretti</i> - Giant Velvet Worm	2
<i>Tasmaphena lamproides</i> - Keeled Snail	2
<i>Tyto novaehollandiae castanops</i> - Masked Owl	33

Table 3. Number of requests for advice by operation type

Forest type	Operation type	Notifications
Native Forest	Advance Growth Retention	2
	Aggregated Retention	3
	Areas to be reserved from harvesting	3
	Clearfall followed by Plantation	2
	Clearfall followed by Sowing of Native Seed	67
	Clearfall to Remain Cleared	18
	Overstorey Removal	1
	Partial Harvesting	3
	Potential Sawlog Retention	2
	Road Construction	6
	Seed Tree Retention	3
	Shelterwood - First cut	4
	Shelterwood - Second cut	3
	Thinning	2
Plantation hardwood	Clearfall followed by Hardwood Plantation	30
	Thinning	13
Plantation softwood	Clearfall followed by Hardwood Plantation	1
	Clearfall followed by Softwood Plantation	7
	Clearfall to Remain Cleared	2

d. *Monitoring and reporting on the standard of compliance with, and the effectiveness of, the endorsed or site-specific management prescriptions contained within forest practices plans.*

- The FPA compliance program assessed 50 FPPs covering the full range of forest operations in 2013–14 as part of the annual compliance audit. The results of this audit are in Appendix 3 of the FPA annual report.
- A report on compliance with strategic management recommendations for threatened fauna species on a State forest block in the NE of Tasmania, Moorina forest block was provided by Forestry Tasmania, Sustainability Branch (Forestry Tasmania, 2014). This report concludes that, in general, the strategic recommendations for threatened fauna species in areas covered by the Tasmanian forest practices system, delivered through the 2001 Threatened Fauna Adviser, have been met through wildlife habitat strips, streamside reserves, other special management zones and unlogged areas. Much of the area retained has been included in the Tasmanian Forest Agreement reserves.

e. *Undertaking investigations and taking any enforcement action that is necessary to achieve compliance with the prescriptions contained within forest practices plans, in conjunction with the DPIPWE where relevant.*

- The Section Head, TS&MS, DPIPWE was notified of any threatened species related compliance investigations throughout 2013–14.
- A total of 55 compliance investigations into alleged breaches of the *Forest Practices Act* or a forest practices plan were completed by the FPA compliance program in the 2013/14 financial year, of which there were 38 investigations which found evidence of a breach. Of the 55 investigations that were completed there were two relating to threatened species, both related to partial harvesting on private property without a plan in threatened native vegetation and masked owl and swift parrot habitat. Both investigations were resolved by

payment of a fine under Section 47B of the *Forest Practices Act*. Total fines were \$9,000 to three individuals.

f. Collaborating with DPIPWE on, and participating in, research and monitoring priorities relating to threatened species management under the forest practices system.

- The Biodiversity Program’s staff contributed to 10 research and monitoring projects in 2013–14: six were related to threatened species management issues. Five of these projects involve collaboration with the TS&MS of DPIPWE. These research projects are summarised in Table 1.
- There was collaboration with external researchers, students and institutions and most were externally funded.
- The FPA and TS&MS specialists continued to provide supervisory support to a number of higher degree students undertaking projects which contributed to FPA priority research areas, including Lisa Cawthen (bats and remnants, PhD), Shannon Troy (spotted-tailed quolls and forestry, PhD), and Tierney O’Sullivan (eagle breeding behaviour, Honours). The FPA raptor specialist also contributed a significant amount of time on Tierney O’Sullivan’s honours project, selecting 14 nest sites across the state, supervising construction of hides and providing input on animal ethic issues. Shannon Troy was successful in completing her DPIPWE, FPA and CRC for Forestry-supported PhD in 2013–14. The results from Shannon’s thesis have increased our understanding of the ecology of the spotted-tailed quoll and have been used in the revision of the range map, habitat description and management recommendations for this species.
- One of the milestones of the FPA and DPIPWE project, (swift parrot and RFA Priority Species Project) funded by the Australian and Tasmanian governments in February 2010 (see 1.5, RFA priority species project in the FPA annual report), was to establish a program to monitor the effectiveness of management actions for RFA priority species (i.e. threatened species that are vulnerable to forestry activities). Several of the projects undertaken have addressed the projects that have been identified as high priority.

Table 1 **Threatened species related research and monitoring projects active in 2013–14 reporting period, with summary of activities undertaken during this period.**

Project title	Activities during period 1/7/13 and 30/6/14
How effective are current management actions in protecting wedge-tailed eagle nest sites in production forests?	Aerial nest surveys for 2013–14 were completed. See also work by Tierney O’Sullivan under student projects
Monitoring the effectiveness of the keeled snail management prescriptions	Sites surveyed for the keeled snail before implementation of the management strategy were re-surveyed to assess the effectiveness of the plan. Results indicate that the population is being maintained, although at a slightly lower density. A report is being prepared.
Testing the mature habitat availability map	Further field work has been done testing the accuracy of the FPA mature habitat availability map in wet forest. This map is used in the management approach for the masked owl, swift parrot and some threatened invertebrate species. This work will be written up in the next financial year. A paper was also published with student Dejan Stojanovic testing the accuracy of the map in dry forest in relation to swift parrot nesting habitat.

STUDENT PROJECTS SUPPORTED BY FPA and DPIPWE

Landscape ecology of the spotted tailed quoll	Shannon Troy submitted her PhD thesis examining the habitat preferences and den requirements of female spotted-tailed quolls. Shannon's results have contributed to the revision of the Biodiversity Values Database and the Threatened Fauna Adviser.
Swift parrot ecology	Dejan Stojanovic has been studying the ecology of swift parrots (and has been testing the FPA Mature Habitat Availability Map). The FPA and DPIPWE are providing logistical and some financial support for ARC funded research.
Swift Parrot ecology	Matt Webb (TS&MS) (enrolled at ANU) is undertaking a PhD study on the ecology of the swift parrot including population trends and habitat use.
Eagle behaviour	Tierney O'Sullivan (Honours) undertook a project designed to assess the behaviour of eagles while on the nest site, but insufficient data was collected to make strong conclusions. The relationship between the timing of the breeding season, climate and prey availability was explored. Funding has been obtained and a PhD student is being sought to continue the behavioural research in 14/15.
Ecology of the eastern quoll	A PhD student (Bronwyn Fancourt) is studying the ecology of the eastern quoll. This project aims to identify the causes of decline of the eastern quoll in its last remaining stronghold. This will be achieved investigating the possible demographic, health, habitat and climatic drivers of decline.

Publications related to threatened species

FPA

- Bonham, K 2013. Monitoring the effectiveness of the keeled snail (*Tasmaphena lamproides*) management plan. Initial report to the Forest Practices Authority.
- Burrows RM, Magierowski RH, Fellman JB, Clapcott JE, Munks SA, Roberts S, Davies PE, Barmuta LA 2014. Variation in stream organic matter processing among years and benthic habitats in response to forest clearfelling. *Forest Ecology and Management* 327, 136-147.
- Forest Practices Authority (2014) Threatened Fauna Adviser, decision-support expert system program. Forest Practices Authority, Hobart, Tasmania.
- Wapstra M & Chuter A 2013. An update on the distribution, reservation and conservation status of fairy lanterns *Thismia rodwayi* F.Muell. (Thismiaceae) in Tasmania. *The Tasmanian Naturalist* 135: 79-89.
- Stojanovic D, Koch AJ, Webb M, Cunningham R, Roshier D, Heinsohn R, 2014, Validation of a landscape-scale planning tool for cavity-dependent wildlife. *Austral Ecology* 39: 579-586.
- Webb MH, Wotherspoon S, Sojanovic D, Heinsohn R, Cunningham RB, Bell P, Terauds A, 2014. Location matters: using spatially explicit occupancy models to predict the distribution of the highly mobile, endangered swift parrot. *Biological Conservation* 176: 99-108.
- O'Sullivan, T. 2014. Breeding behaviour and success of the Tasmanian wedge-tailed eagle (*Aquila audax fleayi*). Honours thesis, University of Tasmania.
- Forestry Tasmania 2014, Implementation of strategic management recommendations for threatened fauna, as delivered by the 2001 Threatened Fauna Adviser, in the Moorina forest

block between 2001 and 2014. Report prepared for the Forest Practices Authority and DPIPW by the Sustainability Branch, Forestry Tasmania – July 2014.

- Todd, MK, Kavanagh, RP, Bell, PJ, and Munks, SA (in prep), 'Calling behaviour of the Tasmanian masked owl.'
- Todd, MK, Kavanagh, RP, Bell, PJ, and Munks, SA (in prep), 'Importance of rodents and bandicoots in the diet of the Tasmanian Masked Owl.'
- Troy, S. N. 2014. Spatial ecology of the Tasmanian spotted-tailed quoll, University of Tasmania.

Technical Notes

- Forest Practices Authority 2014. Identifying swift parrot breeding habitat. Fauna Technical Note 3. Forest Practices Authority, Hobart, Tasmania.
- Forest Practices Authority 2014. Wedge-tailed eagle nesting habitat model. Fauna Technical Note 6. Forest Practices Authority, Hobart, Tasmania.
- Forest Practices Authority 2014. Identifying Tasmanian devil and spotted-tailed quoll habitat. Fauna Technical Note 10. Forest Practices Authority, Hobart, Tasmania.
- Forest Practices Authority 2014. Assessing the suitability of headwater (Class 4) streams for the giant freshwater crayfish. Fauna Technical Note 16. Forest Practices Authority, Hobart, Tasmania.
- Forest Practices Authority 2014. Eagle nest management. Fauna Technical Note 1 (revised). Forest Practices Authority, Hobart, Tasmania.

Reports

- Forest Practices Authority, February 2014, Green and gold frog survey – Perth to Breadalbane (January 2014), Report to DIER Environment and Development Approvals Section, FPA, Hobart
- Forest Practices Authority, December 2013, Central north burrowing crayfish (*Engaeus granulatus*) survey – Bridges Forward program (December 2013), Report to DIER Environment and Heritage Unit, FPA, Hobart
- Forest Practices Authority 2013, 'Central north burrowing crayfish (*Engaeus granulatus*) survey - Railton Main Road, August 2013, Report to DIER Environment and Heritage Unit, Forest Practices Authority, Hobart'
- Forest Practices Authority 2013, 'A review of the legislative requirements, and approaches taken to management of threatened burrowing crayfish', Report to DIER Environment and Heritage Unit, Forest Practices Authority, Hobart
- Forest Practices Authority 2013, 'Central north burrowing crayfish (*Engaeus granulatus*) survey - Sheffield, October 2013, Report to DIER Environment and Heritage Unit, Forest Practices Authority, Hobart'
- Forest Practices Authority 2013, 'Central north burrowing crayfish (*Engaeus granulatus*) survey – Re-survey of Sheffield road after drain clearance, December 2013, Report to DIER Environment and Heritage Unit, Forest Practices Authority, Hobart'
- Forestry Tasmania 2014, Implementation of the strategic management recommendations for threatened fauna, as delivered by the 2001 Threatened Fauna Adviser, in the Moorina Forest Block 2001-2014. Report prepared for the Forest Practices Authority by Sustainability Branch, Forestry Tasmania July 2014.

- Munks, S, and Bell, P 2013, *Procedures for the management of threatened species under the forest practices system: Report on implementation during 2013–14*. Report to the Board of the FPA and the Secretary of DPIPWE

DPIPWE

- Thalmann, S., Wise, P., and Huxtable, S. (2013) Sentinel cameras monitor the emergence of infectious disease in Tasmanian devils. In, *Camera Trapping in Wildlife Research and Management* (Meek, P. D., Ballard, A. G., Banks, P. B., Claridge, A. W., Fleming, P. J. S., Sanderson, J. G., and Swann, D. E., Eds.), CSIRO Publishing, Melbourne, Australia
- Stojanovic, D., Webb, M.H., Alderman, R., Porfirio, L.L. & Heinsohn, R. (2014). Discovery of a novel predator reveals extreme but highly variable mortality for an endangered migratory bird. *Diversity & Distributions* DOI: 10.1111/ddi.12214
- Spencer, C. P. and Richards, K. (2013) Are invertebrate pedestrians threatened? Observations of *Hoplogonus simsoni* from road line transects in northeastern Tasmania. *The Tasmanian Naturalist*, 135: 28-40.
- Bonham, K., Richards, K., Spencer, C. P., Grove, S., Reid, C., Byrne, C., Hird, D. & Throssell, A. (2013) Observations of the Miena jewel beetle *Castiarina insculpta* (Carter, 1934) in the summer of 2012-13. *The Tasmanian Naturalist*, 135: 104-109.

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