

Front page photograph: Field map developed during an on-site assessment of habitat and nesting sites for the swift parrot (*Lathamus discolor*) in a proposed coupe in the south of the state. Following training in the identification of habitat for this species using the DPIPWE/FPA guidelines (Technical Note 3), the planner identified both foraging and nesting habitat as part of the biodiversity evaluation process.

Citation

Munks, S, and Crane, A 2015, *Procedures for the management of threatened species under the forest practices system: Report on implementation during 2014–15*.

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Table of Contents

Summary	4
Background	5
Report on implementation	6
Roles and responsibilities	6
<i>Joint roles and responsibilities of the FPA and the DPIPWE</i>	6
<i>Primary roles and responsibilities of the DPIPWE</i>	7
<i>Primary roles and responsibilities of the FPA</i>	8
Publications related to threatened species	19

Summary

- The *Agreed procedures* are the mechanism by which the requirements for the management of threatened species under the *Threatened Species Protection Act 1995* 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 2014–15 period.
- DPIPWE submitted eight draft listing statements to the Scientific Advisory Committee in 2014–15, including two flora and six fauna species: *Amphibromus macrorhinus* (longnose swampgrass), *Pimelea* sp. Tunbridge (grassland riceflower), *Miselaoma weldi* (Stanley snail), *Roblinella agnewi* (Silky snail), *Tasmaphena lamproides* (keeled snail), *Charopidae* ‘Skemps’ (Skemps snail), *Pasmaditta jungermanniae* (snail (Cataract Gorge)), *Galaxias pedderensis* (Pedder galaxias). Locality data and species management advice delivered via the Natural Values Atlas and the Threatened Species Link were maintained.
- FPA and DPIPWE collaborated on the completion of Technical Notes designed to clarify habitat descriptions for threatened species and the management recommendations delivered by the 2014 Threatened Fauna Adviser.
- DPIPWE provided input to the FPA Biodiversity Course for FPOs in June 2015.
- FPA ran field days on the identification and management of habitat for giant freshwater crayfish, swift parrot, wedge-tailed eagles and devil and quolls.
- FPA maintained existing planning tools, including minor updates to clarify habitat descriptions and range boundaries.
- FPA ran briefings for FPOs and others on the revised Threatened Fauna Adviser and changes to legislation and policy, including the application of the duty of care provision of the Code to PTPZL.
- FPA provided advice on management actions for threatened species for 151 notifications of proposed FPPs in 2014–15. The majority of advice requests were for the management of habitat for the grey goshawk, wedge-tailed eagle, spotted-tailed quoll, Tasmanian devil and masked owl.
- Six proposed FPPs relating to the management of threatened species habitat were formally referred to the Policy and Conservation Advice Branch, DPIPWE in 2014–15.
- Of the 44 investigations that were completed by the FPA compliance program in 2014–15, one related to a threatened species.
- A report on compliance with strategic management recommendations for threatened fauna species on a PTPZL block in the north-west of Tasmania, Salmon River forest block was provided by Forestry Tasmania, Forest Management Services, Conservation Branch (Forestry Tasmania, 2015).
- DPIPWE and FPA have been involved in a number of research and monitoring projects in 2014–15 that relate to threatened species management (e.g. wedge-tailed eagle, Wally’s wattle, dwarf galaxias, use of plantations by Tasmanian devils and spotted-tailed quolls) 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 website. Two students supervised by FPA and TSS staff received their higher degrees in 2014: Shannon Troy (Spatial Ecology of the Tasmanian Spotted-Tailed Quoll, PhD), and Tierney O’Sullivan

(Breeding behaviour and success of the Tasmanian wedge-tailed eagle (*Aquila audax fleayi*), Honours).

Background

The [Agreed procedures for the management of threatened species under the forest practices system](#) ('*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*. Previous reports cover the 2011–12, 2012–13 and 2013–14 financial years. This document provides a summary of the activities that relate to each clause in Part A of the *Agreed procedures* for 2014–15. It contributes to meeting recommendation 16 of the second five-yearly review of progress with implementation of the Tasmanian Regional Forest Agreement (RFA).

Report on implementation

(A) Roles and responsibilities

1 Joint roles and responsibilities of the FPA and 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.*

- After the release of revised versions of the main planning tools in March 2014 (Threatened Fauna Adviser and Biodiversity Values Database) DPIPWE and the FPA agreed to a transition period for FPPs where the planning was substantially completed. This included where scheduling of operations near to eagle nests was largely completed. During this transition period (9/4/2014 – 30/6/14) use of the revised recommended actions delivered by the Threatened Fauna Adviser (ThFA) was considered to be on a voluntary basis.
- FPA Biodiversity Program staff and staff from the Threatened Species Section (TSS) of DPIPWE continued to collaborate on the clarification of the recommended actions delivered through the ThFA in response to feedback from planners.
- Biodiversity Program staff and staff from the TSS collaborated in the running of the Biodiversity Course (Module 12 of the Forest Practices Officer Training Course) in June 2015. This 4-day course is designed for forest practitioners, in particular FPOs and others involved in the preparation of FPPs. There was a particular focus on identifying the values (flora and fauna), assessing the risk of the planned operation, use of planning tools and development of management actions to ameliorate the risk. There were 35 participants (9 private & 26 public) in total.
- A project steering committee was established for the ongoing maintenance of shared planning tools used in the processes and procedures developed for the management of threatened species in areas covered by the forest practices system. This committee includes staff from the FPA and DPIPWE. Topics relating to the revision of range boundaries and habitat descriptions for threatened species delivered through the Natural Values Atlas and the FPA's Biodiversity Values Database were discussed throughout the year as well as proposed minor modifications to the ThFA pathways and management recommendations.
- The FPA sought formal advice from the Conservation Assessment Section of DPIPWE throughout the year on six FPPs that were likely to lead to the certification of an FPP where the proposed management approach (duty of care threshold under the Code and any negotiated voluntary contribution) was not consistent with the DPIPWE/FPA-endorsed recommended actions for a particular species, delivered through the ThFA 2014. There were four cases for FPPs on public land (FN28c, FN008D, KD023F and DN007B), all relating to the management of swift parrot habitat in the Southern Forests. Two were for private-land FPPs, one relating to the clearance and conversion of grey goshawk habitat and one relating to suspected forty-spotted pardalote habitat. In the latter case it was determined by DPIPWE that the location did not contain significant habitat for the species.
- FPA staff continued work on the development of a Threatened Plant Adviser (TPA) in 2014–15. The TPA is a new planning tool which will provide advice on for the management of threatened flora species within areas covered by the forest practices system. The TPA is intended for use by FPOs, forest planners and others conducting biodiversity evaluations as part of the process of developing an FPP. Like the THFA, the TPA will be a web-based decision-support system to deliver consistent management advice and determine areas or

species that are a priority for conservation management. The project team, comprising FPA botanists and consultants, has been meeting on a regular basis since January 2015 to gather up-to-date information and expert opinion and develop draft management recommendations and habitat descriptions for each threatened flora species that has the potential to occur in areas subject to the forest practices system. A series of background reports have been produced, and it is envisaged that a 'draft' TPA will be completed in 2015–16. The project is governed by an FPA and DPIPWE project steering committee and the information produced by the project team will be reviewed by a Scientific Reference Group and a Stakeholder Reference Group in 2015–16.

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 FPPs for the purpose of protecting a threatened species. Where such cases proceed to a tribunal, the FPA and DPIPWE will cooperate in providing evidence to the tribunal.*

- Two cases in 2014–15 involved both threatened species and threatened vegetation communities. In one case the Secretary of DPIPWE advised that the proposed duty of care threshold and voluntary contribution are considered to be making a reasonable contribution to the conservation of the species (and threatened vegetation community) in the context of the broader management framework of the species and consistent with the objectives of the *Threatened Species Protection Act 1995* and the *Nature Conservation Act 2002*. In the second case, the Conservation Assessment Section of DPIPWE advised that it did not consider that formal advice was required from the Secretary of DPIPWE because the agency did not consider that the location contained significant habitat for the species.
- The FPA provided advice to the Department of Public Prosecutions on issues arising from past compensation claims resulting from FPP refusals.

2 Primary roles and responsibilities of DPIPWE

a. *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.*

- The Threatened Species Section (TSS) submitted eight draft listing statements to the Threatened Species Scientific Advisory Committee (SAC) in 2014–15, including two flora and six fauna species: *Amphibromus macrorhinus* (longnose swampgrass), *Pimelea* sp. Tunbridge (grassland riceflower), *Miselaoma weldi* (Stanley snail), *Roblinella agnewi* (silky snail), *Tasmaphena lamproides* (keeled snail), Charopidae 'Skemps' (Skemps snail), *Pasmaditta jungermanniae* (snail (Cataract Gorge)) and *Galaxias pedderensis* (Pedder galaxias).
- Updates were made by DPIPWE to the Threatened Species Link and the Natural Values Atlas.
- The SAC agreed to make recommendations to delist five flora species from the schedules of the Threatened Species Protection Act 1995, viz., *Austrodanthonia popinensis*, *Lachnagrostis scabra* subsp. *scabra*, *Plantago gaudichaudii*, *Poa poiformis* var. *ramifer* and *Sporobolus virginicus*. SAC also agreed to make the following final recommendations for listing of species on the TSP Act: *Pimelea* sp. Tunbridge (grassland riceflower) to be listed as endangered, *Thymichthys politus* (red handfish) to be listed as endangered, and *Brachiopsilius ziebelli* (Ziebell's handfish) to be listed as endangered.
- The draft Tasmanian Threatened Orchid Recovery Plan was amended in the light of public submissions and was subsequently sent to the Commonwealth for consideration for adoption under the *Environment Protection and Biodiversity Conservation Act 1999* (at the September 2015 meeting of the Threatened Species Scientific Advisory Committee).

b. *Coordinating 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 TSS and broader DPIPWWE undertook habitat and/or population monitoring for the following RFA priority species in 2014–15: Tasmanian devil, orange-bellied parrot and a number of threatened flora species (to varying degrees). TSS staff also volunteered spare time to carry out or assist with monitoring of Miena jewel beetle, swift parrot and additional threatened flora species, also with the assistance of the Wildcare group Threatened Plants Tasmania.

3 Primary roles and responsibilities of the FPA

a. *Organising and coordinating training in threatened species and the use of the planning tools for FPOs and others involved in the FPP planning process.*

- Training undertaken by FPA staff relating to threatened species management in areas covered by the forest practices system included:
 - A field day on giant freshwater crayfish was held at the end of March 2015. The course involved presentations and a field trip by researchers from the University of Tasmania and FPA staff. It was designed for those involved in the implementation of the Threatened Fauna Adviser (ThFA) recommended actions for the species. It covered the ecology and conservation requirements of the species, use of the giant freshwater crayfish habitat suitability map and technical guidelines during planning, field identification of potential habitat and the management approach. There were 29 participants.
 - Briefings on the ThFA 2014 and other planning tools for industry planners and managers (x5).
 - Refresher course for FPOs which included an update on policy, planning tools and management requirements related to threatened species. This included information on the FPA's contribution to the management of threatened species and communities in the new legislative environment: the revocation of the *Forestry Act 1920* and its replacement with the *Forest Management Act 2013*, the amendment of the *Forest Practices Act 1985* and the passing of the *Forestry (Rebuilding the Forest Industry) Act 2014*.
 - Briefings for non-government organisations and the Conservation Assessment Branch, DPIPWWE on management of threatened species through the forest practices system.
 - Field day with Timberlands Pacific on the devil and quoll management prescription in a plantation context in northern Tasmania.
 - Training day for FPOs on the identification of swift parrot habitat (run by FPA ecologists in conjunction with ANU species specialist).
 - Eagle nest management 2-day course for forest planners and others involved in natural resource management. A wedge-tailed eagle management course was run which focused on providing participants with general knowledge on eagles and practical field skills to conduct nest searches and apply nest reserve designs when locating nests. This year the FPA included a half-day refresher component to the theory day informing past participants of eagle courses of the research outcomes of the FPA eagle study which led to recent changes in recommended actions delivered

through the ThFA. Two guest speakers, Nick Mooney (independent eagle specialist) and Vanessa Thompson (Forestry Tasmania), provided presentations on the history of eagle management and helicopter nest search techniques.

- A total of 33 people attended the course which comprised 7 refresher and 26 full-course participants. The theory component of the course was conducted at Campbell Town, on 28 April. Participants then attended two field sessions run in the Launceston and Hobart regions on 29 and 30 June respectively. As well as FPOs and forest planners, there were also participants from ecological consultancy companies, regional NRM organisations group personnel, the Tasmanian Land Conservancy, Tasmanian Parks and Wildlife service, the Tasmanian Conservation Trust and DPIPWE.
- Feedback from the theory and field days included particular interest in the recent results of the FPA eagle research and their application to general land management practices and how this has informed and helped to deliver relevant field skills and techniques to correctly identify nest activity status.
- A four-day Biodiversity Course for forest planners and others involved in natural resource management. This course forms part of the FPO course (Module 12) and as such is designed primarily for forest management practitioners; in particular FPOs and planners involved in the preparation of FPPs. It provides important information and training for those who need to identify habitats and the risk of management activities. It also provides training in survey requirements and the intent of management actions required under the forest practices system. There were 36 participants including forest planners and others involved in natural resource management activities.
- Participated in Forestry Tasmania's eagle nest management coordinators meeting to discuss issues with changes to the management recommendations that have arisen over the past year.
- Many of the management recommendations delivered through the ThFA refer the planner to Technical Notes for further guidance or information. See http://www.fpa.tas.gov.au/fpa_services/planning_assistance/advisory_planning_tools/fauna_technical_notes

Work continued on the development of these Technical Notes, seeking endorsement from the Board of the FPA if required through the FPA document release policy and making them available to planners in 2014–15. This work included:

- a technical note clarifying the management approach for wedge-tailed eagle nests was endorsed and made available to planners via the website
- technical notes on identifying habitat for the swift parrot and giant freshwater crayfish were endorsed and made available to planners
- a draft of a technical note on designing fauna-friendly stream crossings was finalised and endorsed by the Board. This technical note is relevant to the management of road crossings within the range of threatened aquatic fauna. It was based on an earlier version that has been available to planners as a draft since 2000
- development of draft technical notes on the identification of habitat for the masked owl and threatened frogs.

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.

- 151 requests for advice on biodiversity issues from FPOs and other forest planners as part of the FPP development process between 1 July 2014 and 30 June 2015.
- Of these, 88 were on public land, with the remainder a mix of private operations. The data in the notification database indicates that field assessments were undertaken for about 25 per cent of notifications. However, this is an underestimate because some involved multiple visits and in some cases any pre-plan visits were not recorded.
- The FPA compliance program assessed 56 FPPs covering the full range of forest operations in 2014–15 as part of the annual compliance (monitoring and assessment program) audit. The results of this assessment are in Appendix 3 of the FPA annual report.
- The Section Head of TSS, DPIPWE, was notified of any threatened-species-related compliance investigations throughout 2014–15.
- A total of 44 compliance investigations into alleged breaches of the *Forest Practices Act 1985* or an FPP were completed by the FPA compliance program in 2014–15, of which there were 32 investigations which found evidence of a breach. Of the 44 investigations that were completed, one related to threatened species, clearing of trees adjoining a class 2 stream which was found to contain Burnie burrowing crayfish. The investigation found that there was no breach of the *Forest Practices Act 1985* because the clearing was exempt under the *Forest Practices Regulations 2007* as clearing for infrastructure and the land had been previously cleared.

c. Developing and providing site-specific management advice for FPPs where the planned operations are not covered by endorsed management prescriptions. This may involve consultation with relevant specialists within DPIPWE and other organisations where specific expertise is required.

- As indicated in (b) FPA Biodiversity Program staff processed 151 requests for advice on biodiversity issues from FPOs and other forest planners as part of the FPP development process between 1 July 2014 and 30 June 2015. DPIPWE and Inland Fisheries Service specialists, specialists from universities and independent specialists 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. The number of requests (151) is slightly lower than the number received in 2013–14 (185). However, a large proportion of biodiversity evaluations, done by forest planners as part of the development of an FPP, still resulted in notifications to the FPA ecologists. This is in part because of the need for interpretation of the management recommendations delivered by the revised ThFA (released in June 2014), particularly in relation to the duty of care provision of the Code. However, it is expected that the number of requests will reduce further in 2014–15 with ongoing support and training of forest planners and others in the use and interpretation of the agreed recommended actions delivered by the revised ThFA and associated planning tools.
- The highest number of requests for advice (>20) were for management issues relating to the grey goshawk, wedge-tailed eagle, spotted-tailed quoll, Tasmanian devil and masked owl. Requests for advice on the swift parrot declined significantly in 2014–15. There were only nine requests for advice on this species for 2014–15, whereas in 2013–14 there were 25. The reasons for this are not clear but may be due to the lack of forestry activity within the breeding range of this species while Forestry Tasmania continues to work with DPIPWE and ANU scientists on a strategic plan for this species. The number of notifications for the Australian grayling and green and gold frog increased in 2014–15. Again the reasons for this are not clear, but may be related to an increase in the number of plans on private land within the range of these species.

- 108 out of the 151 (71%) requests for advice were for native forest operations, the majority being for clearfell operations (59) and clearance and conversion operations (23). A large number of the requests were also for hardwood plantation operations (20%) and the remaining were for softwood operations (5%) or restoration of cleared land (2%) (Table 3). This indicates that the main need for advice is for native forest operations but that specialist advice is increasingly being required for plantation operations. The latter is probably because of the agreed management recommendation for the Tasmanian devil which in some areas requires potential devil denning habitat to be taken into account when planning plantation harvest.
- In 2014–15 the FPA formally advised the Policy and Conservation Advice Branch, DPIWPE of six FPPs (four for PTPZL and two 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 (see also *b* above).

Table 1. Number of requests for advice for threatened flora species (note that 123 of the notifications had no data)

Flora	Notifications
<i>Acacia pataczekii</i> – Wally’s wattle	1
<i>Aphelia gracilis</i> – slender fanwort	1
<i>Arthropodium strictum</i> – chocolate lily	3
<i>Austrostipa scabra</i> – rough speargrass	1
<i>Barbarea australis</i> – riverbed wintercress	1
<i>Bossiaea obcordata</i> – spiny bossia	1
<i>Caesia calliantha</i> – blue grasslily	3
<i>Carex longebrachiata</i> – drooping sedge	1
<i>Cyathea cunninghamii</i> – slender treefern	1
<i>Cyathea Xmarcescens</i> – skirted treefern	1
<i>Dianella amoena</i> – grassland flaxlily	2
<i>Discaria pubescens</i> – spiky anchorplant	1
<i>Epilobium pallidiflorum</i> – showy willowherb	2
<i>Eucalyptus radiata</i> subsp. <i>radiata</i> – Forth River peppermint	1
<i>Glycine latrobeana</i> – clover glycine	2
<i>Haloragis heterophylla</i> – variable raspwort	1
<i>Hovea tasmanica</i> – rockfield purplepea	1
<i>Isolepis habra</i> – wispy clubsedge	1
<i>Juncus amabilis</i> – gentle rush	3
<i>Lepidium hyssopifolium</i> – soft peppercress	2
<i>Ozothamnus selaginoides</i> – table mountain everlastingbush	1
<i>Pentachondra ericifolia</i> – fine frillyheath	1
<i>Phebalium daviesii</i> – Davies waxflower	1
<i>Pimelea curviflora</i> var. <i>gracilis</i> – slender curved riceflower	2
<i>Pimelea flava</i> subsp. <i>flava</i> – yellow riceflower	1
<i>Pterostylis grandiflora</i> – superb greenhood	1
<i>Pultenaea mollis</i> – soft bushpea	1
<i>Pultenaea prostrata</i> – silky bushpea	1
<i>Rumex bidens</i> – mud dock	1
<i>Schenkia australis</i> – spike centaury	1
<i>Schoenoplectus tabernaemontani</i> – river clubsedge	1
<i>Scleranthus brockiei</i> – mountain knawel	1

Flora	Notifications
<i>Scleranthus fasciculatus</i> – spreading knawel	1
<i>Senecio squarrosus</i> – leafy fireweed	1
<i>Senecio velleioides</i> – forest groundsel	3
<i>Stackhousia subterranea</i> – grassland candles	1
<i>Thismia rodwayi</i> – fairy lanterns	2
<i>Triptilodiscus pygmaeus</i> – dwarf sunray	1
<i>Vallisneria australis</i> – river ribbons	3
<i>Westringia angustifolia</i> – narrowleaf westringia	1

Table 2. Number of requests for advice for threatened fauna species (note that 64 notifications had no data)

Fauna	Notifications
<i>Accipiter novaehollandiae</i> – grey goshawk	20
<i>Alcedo azurea diemenensis</i> – azure kingfisher	1
<i>Antipodia chaostola</i> – chaostola skipper	2
<i>Aquila audax fleayi</i> – wedge-tailed eagle	38
<i>Astacopsis gouldi</i> – giant freshwater crayfish	14
<i>Beddomeia briansmithi</i> – hydrobiid snail (Fern Creek)	2
<i>Beddomeia camensis</i> – hydrobiid snail (Cam River)	3
<i>Beddomeia fallax</i> – hydrobiid snail (Heathcote Creek)	1
<i>Beddomeia fromensis</i> – hydrobiid snail (Frome River)	3
<i>Beddomeia fultoni</i> – hydrobiid snail (Farnhams Creek)	1
<i>Beddomeia gibba</i> – hydrobiid snail (Salmon River Road)	1
<i>Beddomeia lodderae</i> – hydrobiid snail (Upper Castra Rivulet)	1
<i>Beddomeia minima</i> – hydrobiid snail (Scottsdale)	4
<i>Beddomeia ronaldi</i> – hydrobiid snail (St Patricks River)	2
<i>Beddomeia salmonis</i> – hydrobiid snail (Salmon River)	1
<i>Beddomeia turnerae</i> – hydrobiid snail (Minnow River)	1
<i>Catadromus lacordairei</i> – Catadromus carabid beetle	3
Cave-dwelling invertebrates	1
<i>Charopidae Skemps</i> – Skemps snail	3
<i>Dasyurus maculatus</i> – spotted-tail quoll	27
<i>Dasyurus viverrinus</i> – Eastern quoll	1
<i>Engaeus granulatus</i> – central north burrowing crayfish	2
<i>Engaeus orramakunna</i> – Mt Arthur burrowing crayfish	3
<i>Engaeus spinicaudatus</i> – Scottsdale burrowing crayfish	1
<i>Engaeus yabbimunna</i> – burrowing crayfish (Burnie)	3
<i>Galaxias fontanus</i> – swan galaxias	3
<i>Galaxiella pusilla</i> - dwarf galaxiid	6
<i>Haliaeetus leucogaster</i> – white-bellied sea-eagle	12
<i>Hoplogonus simsoni</i> – Simson’s stag beetle	1
<i>Lathamus discolor</i> – swift parrot	9
<i>Limnodynastes peroni</i> – striped marsh frog	1
<i>Lissotes menalcas</i> – Mt. Mangana stag beetle	1

Fauna	Notifications
<i>Litoria raniformis</i> – green and golden frog	14
<i>Pardalotus quadragintus</i> – forty-spotted pardalote	1
<i>Perameles gunnii</i> – Eastern-barred bandicoot	7
<i>Phrantela pupiformis</i> – hydrobiid snail (Tyenna River)	3
<i>Plesiothele fentoni</i> – Lake Fenton trapdoor spider	2
<i>Prototroctes maraena</i> – Australian grayling	10
<i>Pseudemoia pagenstecheri</i> – tussock skink	6
<i>Pseudemoia rawlinsoni</i> – glossy grass skink	1
<i>Pseudomys novaehollandiae</i> – new holland mouse	1
<i>Sarcophilus harrisii</i> – Tasmanian devil	22
<i>Tasmanipatus barretti</i> – giant velvet worm	1
<i>Tasmaphena lamproides</i> – keeled snail	7
<i>Tyto novaehollandiae castanops</i> – masked owl	20

Table 3. Number of requests for advice by operation type

Forest type	Operation type	Notifications
Cleared land	Site preparation	2
	Site preparation and planting with eucalypts	2
Native forest	Advance growth retention	4
	Clearfall followed by sowing of native seed	59
	Clearfall to remain cleared	23
	Overstorey removal	1
	Partial harvesting	2
	Potential sawlog retention	2
	Road construction	2
	Salvage–fire killed, lake, dam, other	3
	Seedtree retention	3
	Selective logging	6
	Shelterwood – first cut	1
	Shelterwood – second cut	2
Plantation hardwood	Clearfall followed by hardwood plantation	11
	Clearfall to remain cleared	8
	Salvage–fire killed, lake, dam, other	1
	Site preparation and planting with eucalypts	3
	Site preparation and planting with pines	1
	Thinning	7
Plantation softwood	Clearfall followed by softwood plantation	2
	Quarry operations	1
	Site preparation and planting with eucalypts	1
	Thinning	4

d. Ensuring that provisions within FPPs make an effective contribution to the management of threatened species in accordance with the duty of care requirements of the Forest Practices Code.

e. Monitoring and reporting on the standard of compliance with, and the effectiveness of, the endorsed or site-specific management prescriptions contained within FPPs.

- The FPA compliance program assessed 56 FPPs covering the full range of forest operations in 2014–15 as part of the annual compliance audit. This was slightly higher than last year. The results of this assessment are in Appendix 3 of the FPA annual report.
- A report on compliance with strategic management recommendations for threatened fauna species on a PTPZL block in the north-west of Tasmania, Salmon River forest block, was provided by Forestry Tasmania, Forest Management Services, Conservation Branch (Forestry Tasmania, 2015). 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, widened streamside reserves, other areas set aside from harvesting and coupe dispersal. Formal reserves previously managed by Forestry Tasmania have been transferred to Parks Wildlife Service under the Tasmanian Forest Agreement.

f. Undertaking investigations and taking any enforcement action that is necessary to achieve compliance with the prescriptions contained within FPPs, in conjunction with DPIPWE where relevant.

- The Section Head, TSS, DPIPWE was notified of any threatened-species-related compliance investigations throughout 2014–15.
- A total of 44 compliance investigations into alleged breaches of the *Forest Practices Act 1985* or an FPP were completed by the FPA compliance program in the 2014–15 financial year, of which there were 32 investigations which found evidence of a breach. Of the 44 investigations that were completed, one related to threatened species. This involved the clearing of trees adjoining a class 2 stream which was found to contain Burnie burrowing crayfish (FPA and TSS, 2015). Once the investigation was completed it was determined that there was no breach of the *Forest Practices Act 1985* as the clearing was exempt under the Forest Practices Regulations 2007, infrastructure and previous cleared land.

g. 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 13 research and monitoring projects in 2014–15. These research projects were funded from a variety of external funding sources and involved collaboration with external researchers, students and institutions. Nine were related to threatened species management issues. Four of these projects involve collaboration with the TSS of DPIPWE. These research projects are summarised in Table 4.
- A program to monitor the effectiveness of management actions for RFA priority species (i.e. threatened species that are vulnerable to forestry activities) was established in 2012. Several of the projects undertaken in 2014–15 were those identified as a high priority.
- The FPA and TSS specialists continued to provide supervisory support to a number higher degree students undertaking projects which contribute to our understanding of threatened species, including James Pay (eagle breeding behaviour, PhD), Andre Pracejus (giant freshwater crayfish and forestry, Honours), and Joanna Lyall (responses of native and introduced carnivores to habitat change and fragmentation in northern Tasmania, Masters).

- Tierney O’Sullivan (eagle breeding behaviour, Honours) and Shannon Troy (spotted-tailed quoll habitat use, PhD), both received their higher degrees in 2014–15. The results from these projects have been used to improve the approach taken in the management of habitat for these species.
- The FPA raptor specialist also contributed a significant amount of time to James Pay’s PhD project, providing technical and ecological advice.
- A presentation on the research work undertaken by the FPA was given at the University of Tasmania by the Research Biologist.

Table 4 Threatened species related research and monitoring projects active in 2014–15 reporting period, with summary of activities undertaken during this period.

Project title	Activities during period 1/7/14 to 30/6/15
How effective are current management actions in protecting wedge-tailed eagle nest sites in production forests?	Aerial surveys for 2014–15 were completed. A meeting of the eagle project steering committee was held and it was determined that the focus and scale of the project would be adjusted. The major focus of the project going into the future will be on assessing the timing of the breeding season. The number of nests surveyed will be reduced due to resource constraints and will only include nests known to have been used in the past.
Recovery of threatened flora species in partially harvested areas	A study was initiated in 2007 to determine the effectiveness of management for the rare plant <i>Acacia pataczekii</i> (Wally’s wattle). Plots were established around clumps of mature plants prior to logging. The plots were surveyed after logging in 2007 and then again in 2015. Regeneration plots within the harvested area, the retained clumps, and the skid tracks were assessed in 2015. The results found that there was some damage to the unmarked study plots, but overall there was a high level of retention of adult plants. High levels of regeneration across the study area indicate this species is tolerant of the disturbance resulting from partial harvesting. The study concluded that the management practices implemented were effective.
Habitat use of dwarf galaxias	A study was initiated to determine whether dwarf galaxias use blackwood swamp areas in north-western Tasmania or not. Initial surveys found no fish at any location surveyed. Follow-up surveys at a different time of year located fish in historic sites but not in blackwood swamps. This study concluded that dwarf galaxias do not use blackwood swamps in north-western Tasmania.
Long-term use of devil dens	A potential den site in the Florentine was monitored using cameras. A high level of activity by a range of species was observed, including use by a female devil with pouch young. This den will be monitored for the next 3–5 years to assess long-term use by devils.
How effective is the keeled snail management plan?	In 2013–2014 a historic keeled snail monitoring sites were re-surveyed. A scientific paper outlining the implementation and effectiveness of the keeled snail management plan is being drafted for publication in collaboration with Forestry Tasmania and Kevin Bonham (private).

STUDENT PROJECTS SUPPORTED BY FPA and DPIPWE

These are projects co-supervised by the FPA Biodiversity Manager, FPA Research Biologist and TSS zoologists through their honorary positions with the University of Tasmania. Some have also received support from the FPA raptor specialist.

Effectiveness of management for the giant freshwater crayfish	An Honours student, Andre Pracejus, has commenced a study on giant freshwater crayfish. This study will involve modelling habitat suitability and assessing management effectiveness within plantation areas. This project is co-supervised by the FPA Research Biologist. The outcomes of this project may help target and review future management for this species.
Behaviour of breeding eagles and the impact of disturbance	This PhD project by James Pay is being conducted through the University of Tasmania and is co-supervised by the FPA Research Biologist. The aim of the project is to improve our understanding of the breeding biology and learn more about the types of activities that are disturbing to this species. The overall objective is to determine whether management practices are effective in mitigating disturbance to breeding birds. The information gathered in this project will be used to review the eagle management recommendations. This project is in the very early stages.
Swift parrot ecology	FPA provides in-kind support for an ARC research grant that is funding a PhD (Matt Webb) and a post-doctoral position (Dejan Stojanovic). These projects are assessing habitat use, distribution, and threats to swift parrots. These projects are not supervised by FPA staff.
Responses of native and introduced carnivores to habitat change and fragmentation in northern Tasmania	This MSc project by Joanna Lyall is being conducted through the University of Tasmania and is co-supervised by the FPA Biodiversity Manager. The study is exploring the landscape and stand level factors that influence habitat suitability of plantations for Tasmanian devils and spotted-tailed quolls, and the interaction between devils, spotted-tailed quolls and cats in plantation areas. The field research has been completed and this project is in data analysis phase.

Publications related to threatened species

FPA

Published journal articles

- Chuter, A, Koch A and Duncan, F 2015, 'Monitoring the effectiveness of *Acacia pataczekii* (Wally's wattle) management following partial harvesting in northeastern Tasmania', *Tasmanian Naturalist* vol 12 no 2, p. 2.
- 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.'

Conference presentations

- Mann, D. 'Whose den is that? Identification and management of threatened mammals in a forestry landscape: a case study', poster presentation to *Australian Mammals Society Conference*, Hobart, June 6-10 2015.

- Chuter, A, Koch, A and Munks, S 2014, 'Landscape-scale planning for biodiversity in Tasmanian production forests,' paper presented to *International Union of Forest Research Organizations (IUFRO)*, Salt Lake City USA.
- Koch, A 2014, 'Landscape scale planning for threatened species,' paper presented to *ESA knowledge exchange Hobart*, Hobart.

Newsletter articles

- O'Sullivan, T 2014, 'The breeding ecology of wedge-tailed eagles', *Forest Practices News* vol 12 no 2, pp 4–5.
- Stojanovic, D 2014, 'Sugar gliders are eating swift parrots – but why?', *Forest Practices News* vol 12 no 2, pp. 8–9.
- Koch, A, Yee, M and Bonham K, 2014, 'Has the strategic approach to managing keeled snail habitat on State Forest worked?', *Forest Practices News* vol 12 no 1, pp. 4–5.
- Mann, D and Webb, J 2014, 'Tasmanian Devils 'pine-ing' for a place to call home', *Forest Practices News* vol 12 no 2, pp 12-13
- Lyall, J 2014 'A camera study of Tasmanian devil, spotted tailed quoll and feral cats in north-western Tasmania', *Forest Practices News* vol 12 no 2, pp. 13–14.

Technical Notes

- Forest Practices Authority 2015, *Eagle nest searching, activity checking and nest management*, Fauna Technical Note 1 (revised), Forest Practices Authority, Hobart, Tasmania.
- Forest Practices Authority 2014, *Guidelines for the design and maintenance of stream crossings-culverts*. Fauna Technical Note 15, 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 (revised), Forest Practices Authority, Hobart, Tasmania.

Reports

- Jackson, J and Mann, D. 2015, 'Second survey of blackwood swamps for dwarf galaxid habitat, Murchison district', Report to Forest Practices Authority, Department of Primary Industry, Parks Water and Environment (DPIPWE) and Inland Fisheries Service, May 2015.
- Mann, D. and Jackson, J. (2014), 'Summary of Dwarf galaxid surveys of NW Tasmania', Report to Forest Practices Authority, Department of Primary Industry, Parks, Water and Environment (DPIPWE), and Inland Fisheries Service, October 2014.
- Wiersma, J April 2015, *Eagle nest search report Forward Mining Rogetta Project, Upper Natone north-west Tasmania*, report to Forward Mining Rogetta Project, Forest Practices Authority, Hobart.
- Forest Practices Authority 2015, *Central north burrowing crayfish (Engaeus granulatus) survey – Ballahoo Creek (February 2015)*, report to State Growth Environment and Development Approvals Section, Forest Practices Authority, Hobart.

- FPA and TSMS 2014, 'A survey for burrowing crayfish at 108 McKay Road, Somerset, NW Tasmania' Report to the Forest Practices Authority and Department of Primary Industries, Parks, Water and Environment, Hobart.
- Environment and Development Approvals Section, Department of State Growth 2014, *A guide to managing threatened burrowing crayfish in the Department of State Growth road reserves*, (prepared by the FPA and State Growth), State Growth, Hobart.
- Forestry Tasmania 2015, Implementation of strategic management recommendations for threatened fauna, as delivered by the 2001 Threatened Fauna Adviser, in the Salmon River forest block between 2001 and 2015. Report prepared for the Forest Practices Authority and DPIPW by Forestry Tasmania, Forest Management Services, Conservation Branch, September 2015.

DPIPWE

- Spencer, C.P. & Richards, K. (2014) Did *Castiarina insculpta* (Miena Jewel Beetle) ride on the sheep's back? *The Tasmanian Naturalist*, 136:49-57.
- Stojanovic, D., Koch, A.J., 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, M.H., Wotherspoon, S., Stojanovic, D., Heinsohn, R., Cunningham, R., 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.

Forestry Tasmania

- Forestry Tasmania (2015) Implementation of the strategic management recommendations in the Salmon River forest block between 2005 and 2015. Report prepared for Forest Practices Authority by Forest Management Services – Conservation, Forestry Tasmania – September 2015.

Document control log table

Document summary information

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1.2	9/10/15	Sarah Munks	Added reference for FT report on Salmon River

Stages required for release outside FPA

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