



Research and Advisory Program Annual Report 2009–10



Contents

| | | |
|--------|---|----|
| 1 | The research and Advisory Program..... | 3 |
| 2 | Biodiversity Program..... | 4 |
| 2.1 | Personnel..... | 4 |
| 2.2 | Notifications, advice and site assessments..... | 5 |
| 2.3 | Training, education and communication..... | 7 |
| 2.4 | Planning tools..... | 8 |
| 2.5 | Policy and reviews..... | 9 |
| 2.6 | Research and monitoring..... | 11 |
| 2.7 | Publications..... | 13 |
| 3 | Earth Sciences Program..... | 15 |
| 3.1 | Personnel..... | 15 |
| 3.2 | Notifications, advice and site visits..... | 15 |
| 3.3 | Training and education..... | 15 |
| 3.4 | Planning tools and guideline development..... | 16 |
| 3.5 | Policy, reviews and management issues..... | 16 |
| 3.6 | Research and monitoring..... | 16 |
| 3.7 | Publications..... | 17 |
| 4 | Heritage and Landscape Program..... | 18 |
| 4.1 | Cultural Heritage Section..... | 18 |
| 4.1.1. | Personnel..... | 18 |
| 4.1.2. | Notifications, advice and site visits..... | 18 |
| 4.1.3. | Planning tools and guideline development..... | 19 |
| 4.1.4. | Policy, reviews and management issues..... | 19 |
| 4.1.5. | Research and monitoring..... | 19 |
| 4.2 | Heritage and Landscape Program: Visual Landscape Section..... | 20 |
| 4.2.1. | Personnel..... | 20 |
| 4.2.2. | Notifications, advice and site visits..... | 20 |
| 4.2.3. | Training and education..... | 20 |
| 4.2.4. | Policy, reviews and management issues..... | 20 |
| 4.2.5. | Research and monitoring..... | 21 |

Cover picture: Adrian Slee, the FPA’s Geoscientist, teaching some of the 28 participants about the pathways of west coast glaciers during the two-day Geology for Foresters course in Tullah . This course was a major new forester training initiative in response to a request from FPOs for more supporting information about geological processes and rock identification to support forest planning.

A summary of this report was included in the FPA’s annual report, which is available on the FPA’s website, www.fpa.tas.gov.au.

1 The research and Advisory Program

The Research and Advisory Program of the Forest Practices Authority (FPA) employs specialists in botany, cultural heritage, geoscience, soil and water, visual landscape and zoology. Research and monitoring in these subjects underpins the *Forest Practices Code* and aid its development. The specialists play a key role in the forest practices system. Services provided by the specialists include the following:

- Training, education and liaison with Forest Practices Officers (FPOs) and land managers.
- Ongoing development of a variety of management tools to assist FPOs in preparing forest practices plans (FPPs). These include the Threatened Fauna Adviser, a computer program designed to help FPOs, forest planners and consultants find the appropriate agreed prescriptions for threatened fauna when preparing their FPPs.
- Developing and maintaining up-to-date manuals to document the knowledge that underpins the *Forest Practices Code* and to provide additional guidelines for the practical management of specific values within wood production forests.
- Providing FPOs and land managers with practical specialist advice on identifying and managing the natural and cultural values of forests. This is normally in response to a notification as part of the forest practices planning system.
- Conducting surveys that require specialist expertise.
- Contributing to comprehensive and scientifically based inventories and databases and the updating of these databases through additional research and surveys. Such databases show the occurrence or potential occurrence of values that may require reservation or special management.
- Undertaking research to test the effectiveness of the provisions of the *Forest Practices Code* and proposing amendments if necessary.
- Monitoring the implementation of the *Forest Practices Code* and management prescriptions involving specific values. The specialists work closely with other scientists and professionals in other agencies involved in implementing the forest practices system, such as the Nature Conservation Branch of the Department of Primary Industries and Water (DPIPWE), Forestry Tasmania, forest companies, various CSIRO research divisions, other government departments and universities.

2 Biodiversity Program

2.1 Personnel

Table 1 Staff employed in the Biodiversity Program 2009–10

| Name (<i>Main activity</i> *) | Position | Dates (if not for whole year) | Part-time/contract |
|--------------------------------|--|--|------------------------------------|
| Fred Duncan | Manager (Biodiversity Program); Manager (Strategic Biodiversity Projects) | June 2009–April 2010 April–June 2010 | |
| Karen Richards (<i>ARE</i>) | Ecologist | Worked on PhD thesis part-time Oct 09–Mar2010 | |
| Anne Chuter (<i>ARE</i>) | Ecologist | | |
| Adam Pennington (<i>A</i>) | Ecologist | June–Nov 09 | Contract |
| Tim Leaman (<i>AE</i>) | Ecologist | | |
| Nina Roberts (<i>PET</i>) | Scientific Officer | | Part-time (2 days/week) Fixed term |
| Dydee Mann (<i>A</i>) | Ecologist | | Contract (9 days/fortnight) |
| Sarah Munks (<i>PR</i>) | Senior Research Biologist; Above and A/Biodiversity Program Manager | Until May 2010 April–June 2010 | Part-time (4 days/week) |
| Chris Spencer (<i>AR</i>) | Technical Officer (R & M) and FPA OH&S officer | | |
| Amy Koch (<i>PR</i>) | Project Officer (Tree hollows) | June–Dec 2009 | Contract (fixed term) |
| Jason Wiersma (<i>RE</i>) | Project Officer (Eagles) | | 80% external funding |

* *Main activity within the Biodiversity Program:*

A – Advisory; P – Policy and planning tools; E – Education and training; R – Research and Monitoring; T – Tree Fern Management;

There were some staff changes in 2009–10 with Adam Pennington and Amy Koch leaving and Dydee Mann contracted to replace Adam in the short-term. The current staff includes the Manager, Senior Research Biologist, three full-time and one part-time ecologist, one part-time scientific officer, one full-time project officer and a technical officer.

The equivalent of approximately 4 FTE was spent on the advisory part of the program, 2.5 FTE on the research and monitoring and 1.5 on policy. The higher level of staff time allocated to research activities this year, compared with previous years, was to enable the completion of an FPA-supported PhD by Karen Richards.

2.2 Notifications, advice and site assessments

2.2.1 FPP notifications

Staff conducted field assessments and provided advice (see table 1 for staff involved) to FPOs on implementation of the biodiversity provisions of the code and other issues for 555 FPP notifications in the reporting period covered by this report (table 2). This included about 84 advice requests first received in 2008–09. Another 40 notifications were received in 2009–10, but advice for these will not be completed and sent until 2010–11.

Table 2 Biodiversity Program notifications in 2009–10

| | State forest | Private forest | Total |
|--|--------------|----------------|------------|
| Office assessment and advice provided (approx) | 270 | 182 | 452 |
| Field assessment and advice provided (approx) | 27 | 76 | 103 |
| Total notifications | 297 | 258 | 555 |

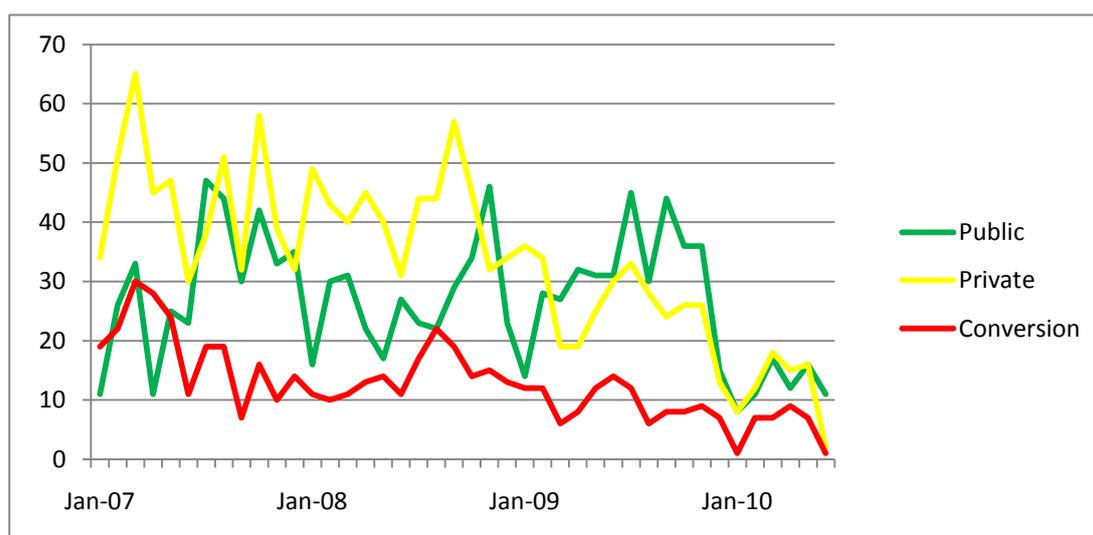


Figure 1 Number of notifications received each month by the biodiversity program since January 2007

The number of notifications decreased by 33 per cent from 2008–09 when 840 were received (Figure 1). The most significant decline occurred in November and December 2009. Since the number of FPPs being certified has remained fairly constant, with only a slight decline observed despite the industry downturn, this drop in the number of advice requests from FPOs, and other forest planners, is thought to be mainly because of simplification of the biodiversity notification process for plantation thinning and small plantation establishment (implemented in 2008–09) and the release of the new biodiversity evaluation sheet in November 2009 (see below). These changes, FPO training courses and development of planning tools (e.g. technical notes, see section 4), allow FPOs to incorporate appropriate prescriptions into FPPs without the need for further advice from biodiversity program staff. FPOs can also seek advice on the implementation of the biodiversity provisions of the code, in the first instance, from conservation planners within their organisation.

The results of evaluations of the notifications received by biodiversity program staff indicated that the draft management prescriptions, developed by FPOs, were generally consistent (in 60 per cent of cases) with those delivered by biodiversity planning tools, notably the *Forest Botany Manual*, the threatened fauna adviser and technical notes. Most of those that weren't consistent were because additional advice

was required because current planning tools (e.g. threatened fauna adviser) do not cover some threatened forest fauna species or parts of their habitat (e.g. central north burrowing crayfish, masked owl, swift parrot). Other advice requests related to eagle nest management and threatened forest and non-forest communities. Although the number of notifications has declined, the complexity of the issues increased, particularly for threatened fauna species (such as the swift parrot) where field visits and extensive consultation with DPIPWE specialists and negotiation with the planner or land manager were required.

Biodiversity Program staff conducted field assessments on about 19 per cent of referred sites. Some areas needed more than one assessment or assessments by more than one staff member, generally in response to a range of biodiversity issues (flora, fauna or vegetation communities). Areas needing complex assessments and advice for forestry-related issues included the southern forests, the north-west, King Island and the eastern part of the Central Highlands. On State forest, most notifications dealt with native forest harvesting. A significant proportion of notifications on private land (including those requiring complex advice) were for conversion of native forest to plantation or agricultural land. Staff developed off-sets for some FPP areas which had operations affecting threatened communities or species.

There was a significant reduction in 2009–10 in the number of FPPs and FPP referrals for small-scale ‘non-forestry’ activities such as clearing for subdivisions and other infrastructure. For several years such referrals have frequently been complex and controversial, and have taken up a disproportionate amount of time and resources. Changes to the Forest Practices Regulations in November 2009 meant that many of these activities were regulated through non-FPA processes – the changes also meant that FPA Biodiversity Program staff could concentrate on ‘core business’ – reducing the average turn-around time for advice to FPOs.

Procedures for consideration of threatened flora and fauna species in operational areas were reviewed in 2009–10, and more streamlined processes were adopted (see Section 5). Formal consultation with DPIPWE specialists (mainly Threatened Species Section) continued for some species (e.g. swift parrot, wedge-tailed eagle) and some operational situations. There was also liaison with staff of Inland Fisheries Service for proposed operations affecting potential galaxiid habitat in the Lake Sorell/Crescent catchments, the Western Tiers and the Mt Foster area.

Turn-around time for forestry-related notifications was similar to the 2008–09 reporting period (average 6 weeks). The response time for some notifications was much longer (>2 months). These notifications were for more complex FPPs (mainly on private land) and for FPPs which required assessment of the strategic context (e.g. swift parrot management in the southern forests and south-eastern Tasmania, Togari forest block and coupes in catchments of Lakes Crescent and Sorell). Consideration of the landscape context, when applying the code provisions for biodiversity, is becoming increasingly important with the increase in coupe adjacency and lack of coupe dispersal.

2.2.2 Site assessments and new threatened species localities

Field visits by FPA staff resulted in many new records of threatened flora and fauna, and increased knowledge of the ranges and habitats of some threatened species. Such information was provided to DPIPWE for inclusion on the Natural Values Atlas and Forestry Tasmania for incorporation into their databases. Changes to FPA procedures in 2008–09 resulted in improvements in the flow of information on threatened species records to DPIPWE (for incorporation into DPIPWE databases).

2.2.3 Other support to FPOs, other planners and compliance program

Co-ordination of wedge-tailed eagle nest searches, nest activity checking and investigating nests discovered during operations, as well as liaison with DPIPWE specialists, took a significant amount of staff time, with 80 new nests recorded in the 2009–10 period.

Biodiversity Program staff assisted with investigations or other compliance advice for about 20 operations (mainly related to threatened species or communities) – some investigations required field visits.

The upward trend in biodiversity-related Forest Practices Tribunal hearings, evident in 2008–09, has further manifested itself in 2009–10. Biodiversity Program staff provided evidence to 12 Forest Practices Tribunal hearings in 2009–10, all relating to refusal or modification of FPPs because of potentially adverse effects on threatened species (e.g. galaxiid species, wedge-tailed eagle, swift parrot) or threatened forest or non-forest communities. Almost all appeals were for proposed conversion of native forest. Most of the tribunal hearings upheld FPA’s decision to refuse or modify FPPs, though compromises were

developed for some FPP areas. Changes in the Tasmanian Government Policy for Maintaining a Permanent Native Forest Estate in December 2009 have the potential to reduce the number of appeals (because of constraints on area that can be converted per property per year). However, this may be offset by an increase in the number of 'speculative' FPP proposals, when FPPs are prepared for sites with marginal production value but potentially high biodiversity value – with FPA's obligation to prevent conversion of threatened communities, or protect important habitat of threatened species, providing grounds for a proponent to seek compensation from the government when their FPP is refused or modified.

2.3 Training, education and communication

The following training courses, field days and other extension activities were organised and conducted by Biodiversity Program staff (see also publications list in section 7):

- field days to train FPOs/planners in the use of the giant freshwater crayfish potential habitat map and fauna technical note (consultants from Freshwater Systems gave presentations at these field days)
- forest botany courses: five, one-day training sessions presented by Fred Duncan
- hollows field days: two field days run by Anne Chuter and Amy Koch
- FPA/CRC landscape symposium: Amy Koch and Anne Chuter organised the symposium and other staff gave presentations. In late March, the FPA, in conjunction with the Cooperative Research Centre for Forestry, held a symposium and field day to discuss managing multiple values (social, cultural, environmental) at a landscape level in Tasmania's production forests. The aim of the symposium was to expose the audience to a range of issues with managing multiple values in forestry situations, and to discuss the objectives and approaches to integrated planning at a landscape level
- FPO course 2009 biodiversity modules: Biodiversity Program staff contributed to the 2009 review of FPO training and accreditation and developed course material and assessments for FPO training courses. Biodiversity modules were presented at the 2009 FPO course. Feedback from the course and assessments was used to refine planning for future FPO training and courses
- final thesis presentation at University of Tasmania by Karen Richards (Dept of Zoology)
- preparation of several articles for *Forest Practices News* and CRC newsletter (Biobuzz)
- presentations to conservation and community groups (e.g. Tasmanian Field Naturalists)
- post-graduate course on forest management in Tierra del Fuego: in February/March 2010, Fred travelled independently to Argentina (with support from the Australian Dept of Foreign Affairs and Trade) giving presentations at the Southern Connections conference and contributing (with Mark Neyland and Simon Grove of FT) to a post-graduate course on forest management, held in Tierra del Fuego. Fred Duncan also travelled to Brazil and Argentina in October 2009, attending three conferences/symposia and giving several presentations on different aspects of biodiversity management in Tasmanian forests (see Section 7). Some strong links have been developed between Tasmanian and Patagonian researchers and practitioners
- ongoing liaison with scientists, industry, public and various interested parties: this included liaison with researchers, regulators and forest planners and managers working on the Australian mainland and overseas (see Section 7 for study tour by Sarah Munks to North America).

2.4 Planning tools

Biodiversity related planning tools and guidelines continued to be developed and updated. The following were initiated or continued in 2009–10:

2.4.1 Fauna values database (FVD)

One of the key recommendations identified in the review of the biodiversity provisions of the *Tasmanian Forest Practices Code* (FPA 2009) called for ongoing development of the web-based fauna values database (FVD), previously known as the threatened fauna manual (TFM). The FVD is a planning tool designed to help forest industry staff (Forest Practices Officers and forest planners) take threatened fauna and their habitats into account when planning harvesting operations. The tool delivers species locality data, species profiles, range maps and habitat maps for forest-dependent threatened fauna occurring in forested areas on both State and private land tenures. The information provided in this planning tool is specifically designed for forest planners, offering a combination of known locality data while also providing valuable supporting descriptions of potential habitat and locations of existing conservation measures (WPAAs, SMZs).

A preliminary review of the current status of the FVD identified problems with the underlying locality data and a series of improvements that need to be completed to update the planning tool. A project for updating the Fauna Values Database was prepared in 2009–10 and work has started on aligning the locality database component of the FVD with the Natural Values Atlas (requiring liaison with DPIPW staff) and on the further development of species range maps.

The threatened fauna locality data and range boundaries available via the Fauna Values Database for planners were maintained throughout 2009–10. Updating of this information has been done with the help of the FPA's GIS, Database and Systems Support Officer. New species range maps developed as new information became available included maps for the swift parrot and hydrobiid snails.

2.4.2 Biodiversity evaluation sheets

The revised biodiversity evaluation sheet (combining the current flora and fauna evaluation sheets) was released in October 2009. The new sheet has improved the efficiency of the FPP notification process and introduced more rigour to some evaluation procedures.

2.4.3 Threatened fauna adviser (TFA)

The Project Steering Committee (PSC) (members from FPA and TSS) continued to work with the consultants throughout the year on the review of the threatened fauna adviser.

The second background document (see publications list) was further developed in 2009–10 as species reviews and draft decision pathways were completed. This reviews information on each of the species to be included in the revised TFA, justifies the structure of new decision pathways and recommends action. Methods include a literature review and specialist consultation. As part of the review process, two mini-workshops were held in 2009–10, where specialists were invited to participate in the review by attending a briefing on the TFA (by the consultants) followed by a guided species-by-species and/or issue-by-issue discussion involving the specialists, PSC and consultants. Workshops were held for threatened fish (with a follow-up meeting with specialists who were unable to attend the main workshop) and threatened raptors (masked owl, grey goshawk, eagle species). The primary consultant has also attended several informal meetings related to the TFA review process, including ones on swift parrot and wedge-tailed eagle habitat management, and on the definition of potential range boundaries for some species.

The review was delayed again in 2009–10 due to a number of unforeseen issues including delays in programming and testing the software, organising species workshops and meetings with species specialists and other demands on PSC members' time. A draft web-based version of the TFA has now been tested on various servers and technical issues have been resolved. A working draft of the revised TFA should be ready for comment from practitioners, the Forest Practices Advisory Council and the Threatened Species Scientific Advisory Committee, as part of the adoption process, in September 2010.

2.4.4 Planning guidelines

FPA Planning guideline 2008/1 – An internal planning framework developed by the FPA for the purposes of delivering management prescriptions to avoid or limit the clearance and conversion of significant habitat for threatened forest fauna.

This planning guideline, released in September 2008, was applied to 24 FPPs for proposed native forest conversion in 2009–10. These included FPPs where conversion of significant habitat for Ptunarra brown butterfly (1), swan galaxias (1), Mt Mangana stag beetle (2), swift parrot (2), white-bellied sea eagle (3), grey goshawk (4) and wedge-tailed eagle (11) was proposed. One of the plans that involved habitat for a wedge-tailed eagle was not developed further. Nineteen of the FPPs were modified to exclude significant habitat. The remaining four FPPs were refused by the FPA and resulted in subsequent hearings before the Forest Practices Tribunal. The tribunal upheld the decision in two of these cases, one case is still pending a decision, and in one the decision was altered as new information showed that significant habitat was not present in the plan area.

*FPA Planning Guideline 2009 (draft) – Interim species habitat planning guideline for the conservation management of *Lathamus discolor* (swift parrot) in areas regulated under the Tasmanian forest practices system.*

The advisory group (Fauna Strategic Planning Group) continued to work on this planning guideline in 2009–10. The approach to the management of swift parrot habitat delivered by the guideline was tested by FPA staff and the outcomes were discussed at the December 2009 meeting of the Fauna Strategic Planning Group. A second draft of this planning guideline has been developed incorporating some of the outcomes from this meeting and new information from related projects (e.g. habitat mapping projects by DPIPWE and FPA). The latest draft has been provided to the Fauna Strategic Planning Group for final comment.

2.4.5 Biodiversity technical notes and field guides (see FPA website)

The field booklet entitled, *Tree hollows in Tasmania: a guide* was launched at the two tree-hollow identification and management training days held in 2009 (see publication list).

The fauna and flora technical note series was reviewed in 2009–10. This review included updating technical information where appropriate, introducing a numbering system to allow planners to easily identify the current version, and updating the format.

The results of the FPA/DPIPWE wedge-tailed eagle monitoring project were used to revise protocols for the management of habitat for this species provided in technical note 1.

Two new fauna technical notes were developed – ‘*Protocol for broad-toothed stag beetle surveys*’ (Technical Note 4) and ‘*Protocol for Mt Mangana stag beetle surveys*’ (Technical Note 5).

Another entitled, ‘*Management of gene flow from plantation eucalypts*’ (Flora Technical Note 12), was completed after comments from FPAC.

A technical note entitled ‘*Assessing juvenile giant freshwater crayfish habitat in class 4 streams*’ was drafted in 2009–10 to help planners with decisions on how to use the potential habitat suitability map when making decisions on management actions for headwater streams. The working draft was completed in August 2009 and made available to those planners who completed the field training course (see above). It is currently only available through training courses.

Work continued on the technical note entitled ‘*Management of tree hollows*’. This technical note is being developed to help planners in the interpretation and implementation of the revised code provisions for hollow dependent fauna. Its development was delayed in 2009–10 due to the delay in the review of the *Forest Practices Code*. Another has been drafted to guide the management of paddock trees.

2.5 Policy and reviews

2.5.1 Review of the biodiversity provisions of the *Forest Practices Code*

As the first step in implementation of the 41 key recommendations made by the Biodiversity Review Panel in 2009, both the Forest Practices Advisory Council and the Board of the Forest Practices Authority commented on the recommendations in 2009–10. These comments are provided on the FPA’s web site.

As a result of these comments, the recommendations have been divided into three categories to guide their implementation. The first category includes those recommendations that are matters for decision by agencies other than the FPA, or by the Tasmanian State Government generally. The second are those recommendations that relate to the *Forest Practices Act 1985* itself. The third and fourth are those that relate to forest practices policies and procedures. The fifth and sixth relate to the *Forest Practices Code* with some requiring further consideration. Work has already commenced on implementing the recommendations that fit into the third and fifth category (e.g. updating of the planning tools, review of monitoring). Updates on progress toward implementing the biodiversity review recommendations will be provided in future reports.

2.5.2 Development of guidelines for strategic planning/landscape level planning

The development of approaches to reduce the impact of forest practices across the landscape on fauna populations (particularly threatened fauna species) continued to be a focus for Biodiversity Program staff in 2009–10. This work is a collaborative effort involving FPA staff and staff from DPIPWVE, Inland Fisheries Service, private forests, forest industry representatives (including Forestry Tasmania), university researchers and NGOs.

In 2009–10 the advisory group (Fauna Strategic Planning Group) continued to focus on the development of a Habitat Planning Guideline for the swift parrot (see above).

FPA and DPIPWVE received funding from the Australian Government in February 2010 for the development of a strategic plan for the swift parrot and a landscape approach for the management of habitat for RFA priority species. FPA are primarily responsible for the latter part of this project and a business plan was developed in 2009–10. As part of the strategic planning for the swift parrot, FPA supported DPIPWVE in surveys of swift parrot nest sites in 2009–10.

2.5.3 Treefern management plan

A trial of new treefern tags (5 subtags per standard tag price) was developed in 2009–10 for trade in non-living parts of treeferns (*Dicksonia antarctica*). These are currently being issued to one treefern harvester for an export shipment.

Monitoring of the implementation of the treefern management plan continued in 2009–10.

2.5.4 Permanent Native Forest Estate Policy and monitoring

Biodiversity Program staff members are responsible for analysing figures from FPA's FPP database, to estimate the extent of conversion of forest communities (based on 1996 benchmarks) and assess trends in conversion. Analyses are conducted at bioregional and state-wide levels, and results are given in FPA's annual report.

Analyses of 2009–10 figures indicate that approx 4.6 per cent of the estimated 1996 state-wide native forest estate has been converted (as at 30 June 2010). In 2009–10 reporting period, 42 ha of the amount converted was area of native forest cleared under dam permits issued by DPIPWVE under the *Water Management Act 1999* and some of this included threatened vegetation communities (approximately 2 ha).

Some non-threatened forest communities are approaching bioregional thresholds, and at a state-wide level, the 95 per cent conversion limit is fast approaching. FPA prepared a case for a more strategic approach to ensure that future social, economic and environmental needs of the Tasmanian community are not jeopardised by an unconstrained approach to forest conversion prior to the end of broad-scale conversion of native forest on private land in 2015 (as specified in the Tasmanian RFA). The government instigated a review of the Tasmanian Permanent Native Forest Estate Policy (December 2009), which resulted in constraints on the area of forest that can be converted on any individual property (40 ha in a year). The changed policies or status of some forest companies involved in plantation establishment has also reduced the extent of forest conversion on private land.

A 2009–10 ruling of the Forest Practices Tribunal has effectively overturned FPA's moratorium on conversion of native vegetation on King Island, resulting in several FPPs being approved (totalling about 500 ha in area) and others (exceeding 4000 ha) being in the system. Re-analysis of the current area of

native vegetation on King Island suggests that reintroduction of a moratorium on clearance is warranted, and would be consistent with Permanent Native Forest Estate Policy requirements.

2.5.6 Threatened Species Prioritisation Project

Staff in the Biodiversity program contributed to a project by the Threatened Species Section which aimed to rank recovery projects to minimise threatened species extinctions. This approach prioritises projects on the basis of their cost efficiency in meeting an objective, to ensure that the maximum is achieved on a limited budget.

2.6 Research and monitoring

Staff members were involved in a variety of priority research and monitoring projects in 2009–10 (Table 3). These projects were, in general, collaborative efforts involving Forestry Tasmania, University of Tasmania, CRC Forestry, Freshwater Systems and DPIPW (particularly the Threatened Species Section). Some relied to a large extent on external funding (e.g. wedge-tailed eagle nest monitoring project, treefern project).

As a supporting partner of the CRC for Forestry, FPA Biodiversity Program staff contributed to CRC Biodiversity and Water projects, particularly 4.2.5, 4.1.4 and 4.1.2, and deliverables (see Table 3).

The FPA Research Working Group continued to administer the FPA student research fund and three grants were awarded in 2009–10 for projects that addressed biodiversity-related issues (awarded to Ryan Burrows, Lisa Cawthen and Laura Parsley). Staff of the Biodiversity Program continued to attract, support and co-supervise higher degree students. Most of the student projects were affiliated with the CRC for Forestry sub-project 4.2.5 ('Management of species of high conservation significance').

Articles on the current student projects supported by FPA were written for *Biobuzz* and *Forest Practices News*. Some past student award recipients produced final reports and theses in 2009–10: Lynda Petherick (2007–08); Rachelle Olsson-Herrin (2008–09); Jorge Rui De Carvalho Martins (2008–09). Others are still collecting field data or are completing their thesis: Erin Flynn (mammals, 2007–08); Michael Todd (owls, 2007–08); Helen Stephens (small mammals, 2008–09); Shannon Troy (quolls, 2008–09). One notable achievement was the completion of a PhD on *Beddomeia* species by Karen Richards, another FPA-supported student, and ecologist within the Biodiversity Program (see Table 3). The results of Karen's thesis and other student projects inform the development and continual improvement of management actions for forest biodiversity.

One of the recommendations from the 2009 Biodiversity Review was that FPA actively reviews and upgrades a systematic program of effectiveness monitoring for biodiversity conservation. A few current projects aim to evaluate the effectiveness of particular management actions for a particular element of biodiversity (e.g. wedge-tailed eagle nest monitoring project, wildlife habitat clump monitoring project). However, a more systematic program to monitor the effectiveness of the code provisions for biodiversity is required. To inform the development of such a program, the Senior Research Biologist, Sarah Munks, received a Max Jacobs Award to undertake a three week study tour in North America during April and May 2010. She visited organisations and individuals involved in long-running, established programs and gathered information on approaches taken to monitoring the effectiveness of forest biodiversity conservation. A report on the outcomes of her trip is currently being prepared.

Other activities in the research and monitoring area included the updating of the database of FPA research and monitoring projects (localities were added to the FPA's GIS system and State forest GIS), ethics and permit reporting, project risk assessments, external funding applications (two were successful in 2009–10), annual reporting requirements for the CRC for Forestry and attendance at the CRC Forestry annual general meeting in Perth. The Eagle Project Officer carried out contract work, relating to eagle management, in 2009–10.

Table 3 Biodiversity research projects that were active in 2009–10 reporting period, with summary of activities undertaken during this period

| Project Title | Activities during period 01/07/09–30/06/10 |
|--|---|
| An ecological, morphological and molecular Investigation of <i>Beddomeia</i> species (Gastropoda: Hydrobiidae) in Tasmania | Karen Richards submitted her PhD thesis in March 2010. Results have informed the revision of threatened fauna adviser recommendations for the genus and headwater stream habitats. The final seminar for this thesis was presented at UTas in May 2010. (CRC sub-project 4.2.5) |
| Relating forest management to stream ecosystem condition in middle and lower catchment reaches in Tasmania | Preliminary sampling of selected sites completed in 2009 with supplementary field data collection completed in Feb-March 2010. Data analysis underway. BBNs being developed in collaboration with Landscape Logic researchers. Consultative group (includes industry stakeholders and funders) meeting to brief on results of gradient analysis in March 2010. (CRC sub-project 4.1.4) |
| Recovery of headwater streams after current <i>Forest Practices Code</i> logging – Warra sites | Sampling continued in 2009–10 by PhD student Ryan Burrows supported by FPA Technical Officer. <i>Forest Practices News</i> article prepared. (CRC sub-project 4.1.2) |
| Effect of disturbance on habitat, population structure and physiology of the common brushtail possum | PhD project by Erin Flynn. Data analysis completed and thesis written up and submitted. Two papers submitted, one in review. (CRC sub-project 4.2.5) |
| Implementation of fauna provisions of Tasmania's <i>Forest Practices Code</i> : before and after improvements to process and prescriptions | Delay in field assessments due to other work commitments, however, data analysis started in 2009–10. |
| Mapping hollow availability | Work conducted in previous years indicated that assessing mature crown density and crown senescence from aerial photographs explains about half of the variability in hollow-bearing tree density across the landscape. This information was used in 2009–10 to develop a 'pilot' map of hollow availability from relevant GIS layers. A paper has been prepared from this work. |
| Value of habitat retained in forestry coupes for hollow using fauna | Paper submitted on the use of hollow-bearing trees retained in partial harvest areas by brushtail possums. Temperature dataloggers remained in habitat clumps and 'control' sites to monitor hollow occupancy. Paper published on bird surveys completed for project monitoring use of native (paddock) trees retained within plantations. Identification of invertebrate samples from tree hollow surveys completed by Tech Officer and paper being prepared by Amy Koch. |
| How effective are current management actions in protecting wedge-tailed eagle nest sites in production forests? | Report drafted for 2008–09 surveys of 61 nests. Surveys for 2009–10 completed and tree-level surveys continued. Additional sites selected for 2010–11 surveys and external funding obtained from Roaring 40s and Mohamed bin Zayed species conservation fund. A paper on the value of indirect signs in assessing nest success was submitted (see publication list). Results from 2007–08 work have been used to inform the revision of planning tools for the management of wedge-tailed eagle habitat. |
| Habitat use, breeding and feeding ecology of the Tasmanian masked owl, <i>Tyto novaehollandiae castanops</i> | Mick Todd (PhD student) continued data collection for the 300 sites surveyed in 2008–09. Data analysis has started. Diet is being determined from pellets with the support of the FPA Technical Officer. |

| Project Title | Activities during period 01/07/09–30/06/10 |
|--|---|
| Contribution of forest remnants to the persistence of insectivorous bats in the landscape: local and landscape factors that affect their use | PhD project by Lisa Cawthen (CRC for Forestry) continued in 2009–10. Sites have been established and work started on a call identification key. Data analysis from her first field season has been completed. External funding received from Royal Zoological Society of NSW, Ethyl Mary Read Award and the Bookend Trust. |
| Survival of <i>Dicksonia antarctica</i> in wet forest following intensive logging and regeneration to native forest | Field work completed for the 2–3 year re-growth sampling period for the Styx Valley study coupe (aggregated retention) and Ben Nevis study coupe (cable harvest). The decision was made not to resample Florentine coupe because of highly irregular regeneration treatment and eventual outcome of patchy planting with <i>Eucalyptus nitens</i> . Data on survival appears consistent with previous Tasmania studies (i.e. around 30% survival) but higher than Victorian studies (which found survival was around 15%). Data is yet to be fully analysed and written up. |
| Edge effects on abundance and health of treefern epiphytes in an aggregate retention coupe | CSIRO Student Research Scheme project (college student). Brief article prepared for <i>Forest Practices News</i> based on report produced during 2008–09 reporting period |
| Effectiveness of wildlife habitat strips in maintaining vegetation structure and composition in wet eucalypt forest | Final analysis of results from experimental and control sites in <i>E. delegatensis</i> forest undertaken in 2009–10. |
| Ecology, habitat and population dynamics of <i>Prasophyllum stellatum</i> | Joint project with ECOtas and DPIPWE. Manuscript prepared and submitted to Tasforests (co-authored with Mark Wapstra of ECOtas), based on field surveys done in the 2007–08 reporting period (with support from FT and Gunns). |

2.7 Publications

Staff or associates of the FPA are indicated in bold type.

Journal and newsletter articles

Bethge, P, **Munks, SA**, Otley, H and Nicol, S 2009, 'Activity patterns and sharing of time and space of platypuses, *Ornithorynchus anatinus*, in a subalpine Tasmanian lake', *Journal of Mammalogy*, 90(6):1350–1356.

Koch, A, **Munks, SA**, and **Spencer, C** 2009, 'Bird use of native trees retained in young eucalypt plantations: species richness and use of hollows', *Wildlife Research*, 2009, 36, 581–591.

Macgregor, JW, Holyoake, CS, **Munks, SA**, Robertson, ID and Warren, KS 2010, 'Preliminary investigation into the prevalence of mucormycosis in the platypus (*Ornithorhynchus anatinus*) in three catchments in north-west Tasmania', *Australian Veterinary Journal* Volume 88, No 5.

Wiersma, J and Richardson A 2009, 'Foraging of white-bellied seaeagles *Haliaeetus leucogaster* in relation to marine fish farms in Tasmania', *Corella*, 33(3): 71–79.

Wiersma, J 2010, 'White-bellied sea eagle' in R Tingay and Katzner T (eds), *The eagle watchers*, Cornell University press, USA.

Reports and booklets

Koch, AJ 2009, *Tree hollows in Tasmania: a guide*, the CRC for Forestry and the Forest Practices Authority, Hobart, Tasmania.

Wiersma, J 2010, *Eagle Nest Monitoring Project – Year 2 2008–09, Timing of the breeding season and nest use. Forest Practices Authority Scientific Report 9*, report to Roaring 40s and the Forest Practices Authority, Hobart, Tasmania.

Conference presentations/abstracts

Burrows, R, Barmuta, L, Magierowski, R, Fellman, J 2010, ‘Nutrient retention of headwater streams in natural and disturbed catchments’, poster presented at CRC for Forestry’s annual science meeting, Fremantle, Western Australia 18–21, May 2010.

Cawthen, L, Munks, S, Nicol, SC, McCallum, H, and Law, B 2010, ‘Whose calling? Developing a bat call identification key for Tasmanian bats’, poster presented at Australasian Bat Society conference, July 2010.

Cawthen, L, Munks, S, Nicol, SC, McCallum, H, and Law, B 2010, ‘Assessing the effectiveness of forest retention measures for insectivorous bats’, poster presented at Cooperative Research Centre for Forestry’s annual science meeting, Fremantle, Australia, May 2010.

Duncan, F, Munks, S and Wilkinson, G 2009, ‘Management of biodiversity in the temperate forests of Tasmania (Australia): the role of Tasmania’s forest practices system’, Presentation at IALE Congress – Landscape Ecology in Latin America: Challenges and Perspectives, Campos do Jordão, Brazil, October 2009.

Duncan, F, Gilfedder, L and Davy, C 2009, ‘The role of forest managers in conservation of threatened native grasslands in north-western Tasmania’, poster presented at World Forest Congress, Buenos Aires, October 2009.

Duncan, F, Chuter, A, Brown, MJ and Grove, S 2009, ‘Are wildlife habitat strips effective in maintaining vegetation structure and composition in Tasmanian wet eucalypt forest?’, poster presented at World Forest Congress, Buenos Aires, October 2009.

Duncan, F, Collado, L and Cruz, G 2009, ‘Native forest management and regulation at the end of the world: Tierra del Fuego and Tasmania’, poster presented at World Forest Congress, Buenos Aires, October 2009.

Duncan, F, Munks, S and Wilkinson, G 2009, ‘Manejo de biodiversidad en los bosques temperados de Tasmania: el rol del sistema de prácticas forestales’, presentation at Fourth Seminar on Biometry and Production of Nothofagus, University of La Plata, La Plata, Argentina, October 2009.

Duncan, F, Gilfedder, L and Onfray, R 2010 ‘The role of forest managers in conservation of temperate montane grasslands in northwest Tasmania’, presentation at IV Southern Connections Conference, Bariloche, Argentina, February 2010.

Duncan, F 2010 ‘Los Bosques de Tasmania: Resumen de su ecología y distribución’ presentation at post-graduate course Forest management and biodiversity conservation in southern cool temperate forest ecosystems, Ushuaia, Tierra del Fuego, Argentina, March 2010.

Duncan, F 2010, ‘Los Bosques de Tasmania: Implementación de Prácticas Forestales’, presentation at post-graduate course Forest management and biodiversity conservation in southern cool temperate forest ecosystems, Ushuaia, Tierra del Fuego, Argentina, March 2010.

Jennings, S, **Duncan, F** and Pannell, J 2009, ‘Succession-based management of blackwood swamp forests in Northwest Tasmania’, poster presented at World Forest Congress, Buenos Aires, October 2009.

Todd, M 2009, ‘Distribution and abundance of the Tasmanian Masked Owl *Tyto novaehollandiae castanops*’, Australasian Ornithological Conference, Armidale, December 2009.

Wapstra, M, **Duncan, F** and **Roberts, N** 2009, ‘Managing threatened flora in wood production forests in Tasmania: a pragmatic approach’, poster presented at World Forest Congress, Buenos Aires, October 2009.

Theses submitted for projects supported or co-supervised by the FPA

Richards, K 2010, ‘An ecological, morphological and molecular investigation of *Beddomeia* species (Gastropoda: Hydrobiidae) in Tasmania’, PhD thesis, UTas, Hobart.

3 Earth Sciences Program

3.1 Personnel

Table 1 Personnel

| Name | Position |
|----------------|----------------------------------|
| Peter McIntosh | Senior Scientist, Earth Sciences |
| Adrian Slee | Geoscientist |

3.2 Notifications, advice and site visits

Table 2 Earth sciences notifications from State and private forest, 2009–10

| | State forest | Private forest | Total |
|------------------------------------|--------------|----------------|-------|
| Advice provided, office assessment | 174 | 108 | 282 |
| Advice provided, field assessment | 58 | 45 | 103 |
| Total notifications | 232 | 153 | 385 |

The number of notifications responded to (385) has fallen from 572 in 2007–08, and 484 in 2008–09. This is because of fewer notifications for plantation conversion on private property and a change of procedure within the Earth Sciences Program: where possible notifications for soil & water and geoscience are now dealt with together (and recorded as one response) rather than separately, as was the case in the past. The number of notifications requiring field assessment has increased since last year, mostly because of the need to make field checks in the Tyenna, Picton and Lune valleys where proposed forestry activities may have effects on karst values, and the extent and nature of the karst is not well known.

Notifications took up 52 per cent of staff time.

3.3 Training and education

In July 2009, the FPA Geoscientist attended the 7th International Conference on Geomorphology (ANZIAG) in Melbourne and presented a talk on sinkhole management.

The Senior Scientist, Earth Sciences and the Geoscientist helped present courses on soil & water and geoscience issues at the 2009 Forest Practices Officer course at Maydena. This was followed by a joint soil & water/geoscience field excursion in the Styx and Florentine valleys, in which trainee FPOs were introduced to issues of cave and sinkhole management, protection of geological sites of significance, and assessment of soil erodibility.

A major new forester training initiative was begun this year: in response to a request from FPOs for more supporting information about geological processes and rock identification to support forest planning, the Senior Scientist, Earth Sciences and the Geoscientist organised a two-day residential Geology for Foresters course at Tullah. Twenty eight participants attended the mainly field based course and looked at the geology of the west coast, observing features in rocks ranging from the Precambrian to the Quaternary, and making links to practical coupe management where the opportunity arose. Indoor sessions concentrated on understanding geological and geomorphological processes, rock identification and reading geological maps.

The Senior Scientist, with the Compliance Manager, ran a course for forestry supervisors near Orford, chiefly looking at issues concerning roading, drainage, cultivation and streamside reserves in a plantation coupe.

A field day was held in the Huon District to help develop guidelines for roading in highly erodible soils formed in sandstone.

Both the Senior Scientist, Earth Sciences and the Geoscientist presented papers in the Landscape Symposium organised by the FPA in March 2010.

The Senior Scientist, Earth Sciences is one of the editors of *Forest Practices News*.

Training took up 24 per cent of staff time.

3.4 Planning tools and guideline development

Both scientists in the Earth Sciences Program are members of the Tasmanian Geoconservation Database (TGD) reference group and through this group contribute to the identification and protection of new sites of geological and geomorphological significance in the forest estate. The Geoscientist has also contributed to the upgrading of the Karst Atlas for Tasmania. Both the TGD and the Karst Atlas are used by forest planners for assessing risks prior to forest operations.

3.5 Policy, reviews and management issues

The Senior Scientist, Earth Sciences attended several meetings, including a field excursion, of a working group set up by NRM North to assess modelling studies into sources of sediment entering the Tamar estuary. The FPA provided feedback on the methodology and interpretation in a consultant's draft report, which was subsequently modified. The Senior Scientist, Earth Sciences has also reviewed a paper for an international journal, contributed to the *Forest Practices Code* review and completed a report on the forest practices system in British Columbia, Canada.

Policy, reviews and administration took up 7 per cent of staff time.

3.6 Research and monitoring

Throughout the year the Geoscientist has worked with a conservation officer at DPIPW on a number of karst management issues. In conjunction with Norske Skog staff, he has also selected a study area to look at the possible effects of pine harvest on landforms in the Florentine Valley.

The Senior Scientist, Earth Sciences has continued work on dating sites showing past erosion in the forest estate and, with an independent researcher completed a paper on natural rock formations and markings made during tin prospecting on the Blue Tier, north-eastern Tasmania. The paper was published in *Australian Archaeology*.

A field day was held with the local *Friends of the Quaternary* group in Hobart, assessing evidence for intense erosion from mid altitude to near sea level in the Derwent and Styx valleys in the last 100 000 years.

The Earth Sciences Program continues to monitor harvest of the pine plantations in Strahan, to ensure that environmental effects are minimal. The plantations were established on highly erodible and in some places steep sand dunes before the first *Forest Practices Code* was written. The FPA has written guidelines to govern harvest; forest practices plans have to include provisions for setting aside and revegetating with native plants those areas where future harvest is unlikely to be sustainable.

Research took up 17 per cent of staff time.

3.7 Publications

Journal papers

Field, J and McIntosh, PD 2009, 'A re-evaluation of 'petroglyphs' on Blue Tier, northeast Tasmania', *Australian Archaeology* 69, 11–20.

Slee, A 2010, 'Mt Nicholas – Permian limestone karst of north-east Tasmania', *Australian Cave and Karst Management Association Journal*, 78, 22-23.

Conference papers and abstracts

Slee, A, Hammond, A and McIntosh, PD 2009, 'Management of sinkholes in plantations: implications for the Tasmanian *Forest Practices Code*', abstract presented at the 7th *International Conference on Geomorphology (ANZIAG), karst geomorphology*, Melbourne Convention and Exhibition Centre, Melbourne, Australia, 6-11 July 2009, p.63.

Internal reports

McIntosh, PD 2009, The forest practices system in British Columbia, report on a short study tour, Forest Practices Authority, Hobart, Tasmania.

4 Heritage and Landscape Program

4.1 Cultural Heritage Section

4.1.1. Personnel

Table 1 Personnel names and dates

| Name | Position | Dates (only if not for whole financial year) |
|-----------------|---|--|
| Denise Gaughwin | Manager, Heritage and Landscape Program | |
| Sharnie Everett | Senior Aboriginal Heritage Officer | February 2009 to August 2009 |

4.1.2. Notifications, advice and site visits

Table 2 Cultural Heritage Section notifications from State and private forest, 2009–10

| | State forest | Private forest | Total |
|--------------------------------------|--------------|----------------|-------|
| Advice provided | 170 | 204 | 374 |
| Field assessment and advice provided | 245 | 159 | 404 |
| Total notifications | 415 | 363 | 778 |

During 2009–10, 778 notifications were assessed for cultural heritage issues.

Of these notifications, 363 were received from private companies and 415 from Forestry Tasmania. In comparison, 790 notifications involving cultural heritage issues were received in 2008–09.

The majority (80 per cent) of these assessments were to complete an Aboriginal heritage survey, with 622 coupes assessed. New sites were located on 37 (5.9 per cent) of coupes surveyed with a total of 232 artefacts located. Most of these new sites (35 per cent) had isolated artefacts, whereas 30 per cent of new sites contained two to five artefacts and a further 30 per cent of new sites contained six to twenty artefacts. The final five per cent of new sites were found on one coupe near Selbourne where two sites had around 80 artefacts, which comprised 34.5 per cent of all artefacts recorded this year.

The level of request for Aboriginal assessments remains similar to previous years. This level cannot be sustained by the FPA. An Aboriginal Heritage Officer has not been appointed and it was necessary to undertake desk top assessments as the regrowth in a large number of coupes prevented a successful field survey. Desk top assessments were undertaken for 45 per cent of coupes with 55 per cent requiring a field assessment after the initial assessment. Of these 339 field surveys, 68 per cent were completed by forest industry staff trained by the FPA and 32 per cent by the FPA. Work is progressing on the site data from over 200 sites now processed by the Aboriginal Heritage Office.

A total of 43 new historic sites were located, recorded and assessed. These new sites have been entered on the Conserve data base. New sites include remote huts remains, timber tramways and sawmills as well as mining and infrastructure heritage. Advice was provided on the appropriate management and promotion of a number of heritage places on State forest that have attracted the interest of community groups.³ Training and education

The Manager, Heritage and Landscape Program:

- presented a cultural heritage component to the Forest Practices Officer course, covering historic and Aboriginal heritage identification and management
- delivered a presentation to Huon District (all staff) on land manager's responsibilities and the identification and management of heritage values
- participated in the 'Going Bush' series to promote the role of heritage management by the FPA in wood production forests.

4.1.3. Planning tools and guideline development

A review of the results from ten years of Aboriginal survey was initiated and completed. The results of this review will form the basis for the development of new guidelines.

A review of the prescriptions given for historic tramlines is underway.

4.1.4. Policy, reviews and management issues

The Manager, Heritage and Landscape Program participated in the following by invitation:

- review of the Burra Charter conducted by ICOMOS Australia
- heritage forum on proposed changes to *Historic Cultural Heritage Act 1995* conducted by Heritage Tasmania
- a forum on the future of Museum Archaeological collections, conducted jointly by the Queen Victoria Museum and Art Gallery and The Tasmanian Museum and Art Gallery.

4.1.5. Research and monitoring

The Manager, Heritage and Landscape Program:

- presented a paper to the FPA/CRC Landscape Symposium entitled 'Cultural Landscapes of Tasmania – A brief history'
- chaired the organising committee for the annual conference of the Australasian Society for Historic Archaeology
- engaged in ongoing liaison with all appropriate agencies, including Heritage Tasmania, Mineral Resources Tasmania, the Aboriginal Heritage Office, local government and the Tasmanian Aboriginal Land and Sea Council.

4.2 Heritage and Landscape Program: Visual Landscape Section

4.2.1. Personnel

Table 1 Personnel

| Name | Position |
|----------------|--------------------------|
| Bruce Chetwynd | Senior Landscape Planner |

4.2.2. Notifications, advice and site visits

Table 2 Visual Landscape Section notifications from State and private forest, 2009–10

| | State forest | Private forest | Total |
|--|--------------|----------------|-------|
| Advice provided | 3 | 32 | 35 |
| Field and or detailed assessment and advice provided | 21 | 60 | 81 |
| Total notifications | 24 | 92 | 116 |

The Senior Landscape Planner received roughly two-thirds the number of notifications during 2009–10 than during 2008–09, following the reduced level of activity in plantation establishment. A few additional coupes were reviewed in response to visual landscape complaints from FPOs and the public.

4.2.3. Training and education

The Senior Landscape Planner:

- presented a one day landscape segment at the 2009 FPO course which included a field trip to the Deloraine and Mole Creek area. This area had not previously been studied in the landscape segment and so required research on a range of operations around the area and preparation of new scenarios and illustrations for training
- attended the FPO course training debriefing day at Campbelltown
- presented a talk on landscape character assessment of the Tasman Peninsula at the FPA's Landscape Symposium in Hobart and led a segment of the discussion on the field day at the Tasman Peninsula
- convened a day long workshop for forestry planners practicing computer based analysis for landscape evaluation of proposed FPPs. This was attended by a representative from most forest planning offices in November 2009
- attended a variable retention field day run by FT.

4.2.4. Policy, reviews and management issues

The Senior Landscape Planner:

- reviewed the *Forest Practices Code* and drafted additional aspects to upgrade sections on plantation landscapes
- commenced a review of Tasmanian municipal planning documents, guidelines and zoning for visual landscape values to be prepared as background material for FPOs.

4.2.5. Research and monitoring

As part of a current Visual Standards Review project, the Senior Landscape Planner developed a visual criteria and objectives table for evaluating forestry operations. This encompasses plantation forestry, native forest clearfelling and partial harvesting with references to both local and interstate published material. A visual evaluation methodology based on existing theory and models has been adapted as a review method for this study. The field inspection stage is now underway.

Document Control Log Table

Document Summary Information

| | |
|----------------------------|---|
| Document name | Research and advisory program annual report 2009–10 |
| Version | 1.1 |
| Trim record | 2010/113999 |
| Owner | Sarah Munks |
| Author(s) | Sarah Munks |
| Release date | October 2010 |
| Release approved by | CFPO |
| Release status | Public document |

Version Control

| Version | Date | Author(s) | Summary of changes |
|---------|--------------|-------------|--|
| 1.0 | October 2009 | Sarah Munks | |
| 1.1 | January 2011 | Chris Grove | Added version number, Trim record, and doc control tables. |

Stages required for release outside FPA

| Category of advice | | C |
|-----------------------------|-----------------------|------------------|
| Stages | Required/not required | Completed (date) |
| Specialist | Not required | |
| Line Manager | Not required | |
| Peer/FPO/stakeholder review | Not required | |
| CFPO | Required | October 2010 |
| FPAC | Not required | |
| Board | Not required | October 2010 |