

Striped Skink
(*Oligosoma striatum*)
Recovery Plan

1998 - 2003

THREATENED SPECIES RECOVERY PLAN NO. 24



Department of Conservation
Te Papa Atawhai

Striped Skink *Oligosoma striatum* Recovery Plan

THREATENED SPECIES RECOVERY PLAN NO. 24

Published by
Biodiversity Recovery Group
Department of Conservation
PO Box 10-420
Wellington, New Zealand

Prepared by:
A.H. Whitaker, Motueka, New Zealand
for the Biodiversity Recovery Unit
© February 1998, Department of Conservation

ISSN .1170-3806

ISBN 0 - 478 - 01989 - 0

Cover photo: Striped skink (*Oligosoma striatum*), Little Barrier Island. A.H. Whitaker

Contents

	Page
1. Introduction	1
2. Distribution and Causes of Decline	3
2.1 Past distribution	3
2.2 Present distribution and status	3
2.3 Reasons for decline	5
2.4 Captive populations	5
3. Biology and Ecology of Striped Skinks	7
4. Threats to Striped Skinks	9
4.1 Habitat destruction or degradation	9
4.2 Population size	9
4.3 Predation	9
5. Ability of Species to Recover	11
6. Options for Recovery	13
7. Recovery Strategy: Goal and Objectives	17
7.1 Long-term goal	17
7.2 Objectives	17
8. Recovery Strategy: Work Plan	19
9. Research Priorities	25
10. Acknowledgments	27
References	29
Appendix 1: Recommended Time Line for Objectives over the first five Year Period	31
Appendix 2: Biological and Ecological Data to Record for Striped Skinks in the Wild	33
Appendix 3: Biology and Ecology of Striped Skinks	35
Appendix 4: Captive Maintenance and Breeding of Striped Skinks	41
Appendix 5: Published Recovery Plans	43

1. Introduction

The New Zealand lizard fauna, with more than 60 recognised species (Daugherty *et al.* 1994), is currently regarded as being one of, if not the most diverse for any large temperate land mass (Daugherty *et al.* 1990). *Hoplodactylus* and *Oligosoma*, each with at least 22 species (Daugherty *et al.* 1994), are the largest genera in this fauna, larger than any other genera of vertebrates in the New Zealand region.

Of concern is that a very high proportion (approximately 40%) of the extant lizard fauna is at risk. This includes more than half (12) of the *Oligosoma* species (Daugherty *et al.* 1994, IUCN 1996, Bell 1997), of which seven have a Category A ranking for conservation priority within the Department of Conservation (Molloy & Davis 1994). One of these species is the striped skink *Oligosoma striatum*.

The striped skink is a poorly known and rarely seen small lizard (maximum snout-vent length (SVL) < 80 mm), from widely scattered inland locations in the northern and central part of the North Island. Fewer than 120 individuals have ever been found, from about 40 localities. The species is easily recognised by its broad, bold, and pale (almost white) dorso-lateral longitudinal stripes and under surface covered with dark speckles (see front cover).

Although the striped skink was first described well over a century ago (Buller 1871), only six specimens were collected in the 90 years following its discovery. The significance of most of these specimens was not realised until the last few years. One specimen collected at Kakahi in the central North Island in 1948 prompted the description of *Leiopisma latilinearum* (McCann 1955). As late as the 1960s no extant populations of striped skinks were known.

In 1967 a striped skink was found in rough farmland near Uruti, north Taranaki, and in the following few years small isolated populations were discovered in similar habitat at several localities in eastern Taranaki (Whitaker 1993). The first indication that the species might have a wider distribution came in the early 1970s when striped skinks were found in the King Country and on the Mamaku Plateau (Hardy 1977), soon followed by the knowledge the species occurred at Kaipara Flats in Northland (Robb 1974) and the location of an old museum specimen from the Waitakere Range near Auckland (Newman & Towns 1985). More recently individual striped skinks have been found by chance at several other sites in the south Waikato, King Country and Mamaku Plateau, and most surprisingly on Great Barrier Island and Little Barrier Island (Whitaker 1993, Anon 1995).

Through the 1970s a decrease in numbers and a reduction in suitable habitat in eastern Taranaki led to fears being expressed for the continued survival of striped skinks, at least in that region (Hardy & Whitaker 1979, Melgren 1980,

¹ Three other skinks (*Oligosoma grande*, *O. homalonotum*, *O. ottagense*) are already the subject of Species Recovery Plans.

² Placed in the synonymy of *Oligosoma striatum* by Hardy (1977).

Whitaker 1993). This concern was raised at a major herpetological symposium organised by the New Zealand Wildlife Service in 1980, and consequently the species was accorded a moderate high priority rating for conservation and research (Newman 1982). This recommendation was subsequently adopted by the Wildlife Service which gave research into the distribution, ecology and habitat requirements of striped skinks high priority (Crawley 1981 & 1983, Bell *et al.* 1983). During the same period striped skinks were listed as having an IUCN rating of vulnerable (Williams & Given 1981, Bell 1986).

Despite all this professed concern no research or other work was undertaken on striped skinks until the early 1990s when several (largely unsuccessful) surveys were undertaken in eastern Taranaki and a major review of the species was undertaken (Whitaker 1993, 1994), followed by more detailed studies on a small population in farmland habitat near Stratford (Caskey 1995a-c, 1996).

This recovery plan differs significantly from previous plans prepared for reptiles. Because the biology, ecology and distribution of the striped skink are so poorly known, and the species has proved virtually impossible to find in natural habitats, the emphasis over the next five-year period is placed on research and survey rather than management for recovery. It is not clear at this stage that the species requires management to ensure its continued survival.

Robust skink *Cyclodina alani* Whitaker's skink *Cyclodina whitakeri* grand skink *Oligosoma grande*, chevron skink *Oligosoma homalonotum* Otago skink *Oligosoma otagense*, and tuatara *Sphenodon guntheri* and *S. punctatus* (Towns 1992, Towns & McFadden 1993, Cree & Butler 1993, Whitaker & Loh 1995).

2. Distribution and Causes of Decline

2.1 PAST DISTRIBUTION

There is no conclusive evidence that the range of striped skinks has ever been wider than it is at present. However, the limits of this distribution in the north, south and east do not coincide with any other biogeographical pattern (so far as can be determined) and do not correlate with any other limit of range for New Zealand reptiles. The past distribution of apparently suitable habitat, lowland podocarp/hardwood forests dominated by taws (*Beilschmiedia tawa*), and the highly elusive nature of the species means it is possible that they were (or still are) more widely distributed in the North Island (Whitaker 1993).

A record of a striped skink from supra-littoral habitat at Island Bay, on the Wellington coast, has been dismissed as unreliable, and a Canterbury Museum specimen (CM Rep 195) from Wellington probably refers to the province rather than the city (Whitaker 1993).

2.2 PRESENT DISTRIBUTION AND STATUS

Striped skinks are presently known from around 40 widely scattered localities between Northland (Kaipara Flat), Bay of Plenty and south Taranaki, including Great Barrier Island and Little Barrier Island (Whitaker 1993, Anon 1995) (see Figure 1). The aggregation of records in Taranaki is regarded as an artifact of search effort.

All the localities where striped skinks have been found are below 700 m elevation and are either in lowland podocarp/hardwood forests or in modified environments that were covered by such forests in the recent past (<120 years).

The striped skink has been assigned a IUCN Red List status of Vulnerable (facing a high risk of extinction in the wild in the medium-term future). Our present knowledge indicates its area of occupancy is <2000 km², the striped skink populations are severely fragmented, and there is a continuing decline in the area of occupancy, habitat quality and extent, and therefore a decline in the number of populations is projected (IUCN 1996). The departments species ranking system (Molloy and Davis, 1994) lists striped skink in Category A "Highest priority species for conservation action".

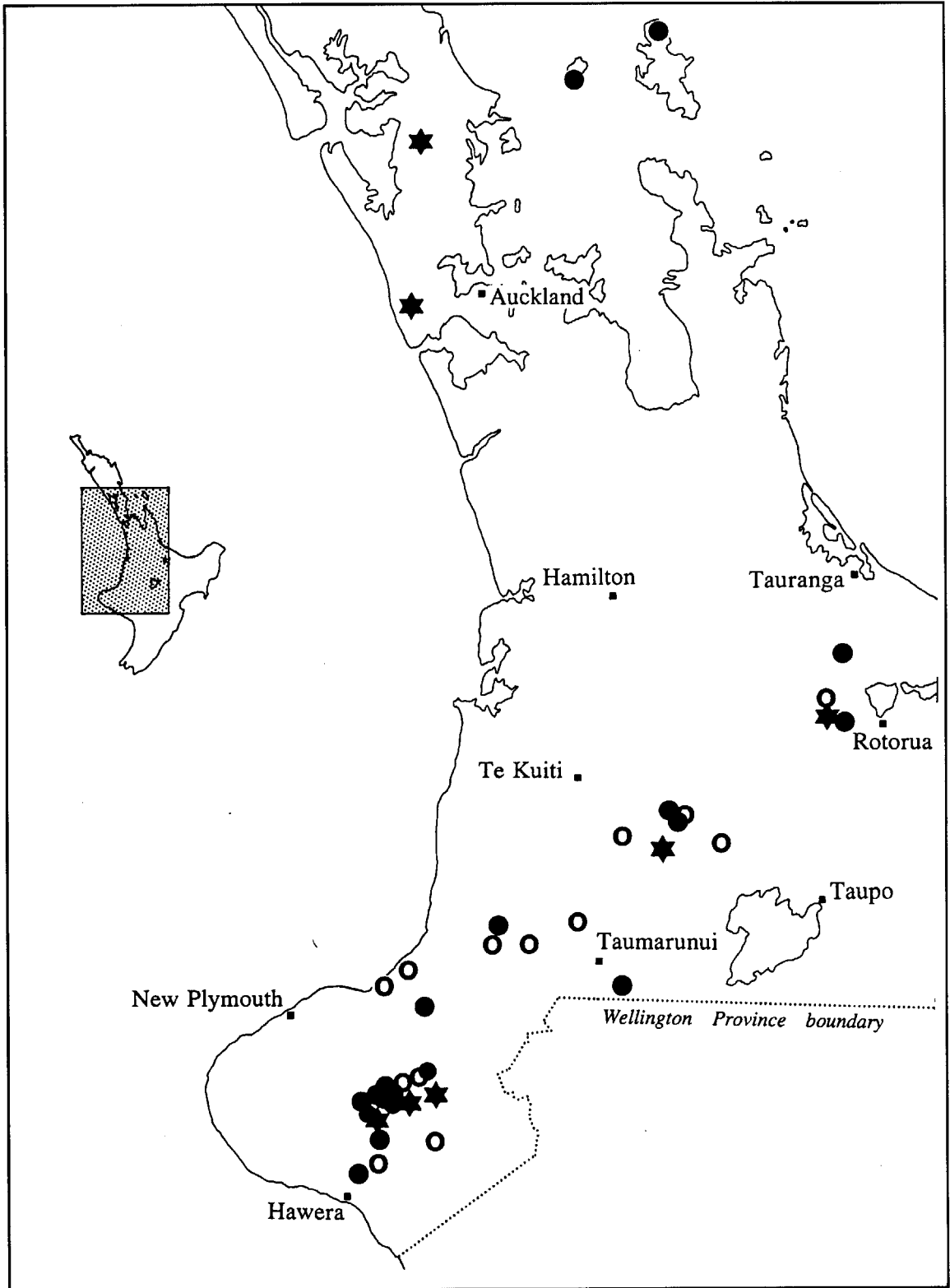


FIGURE 1. DISTRIBUTION OF STRIPED SKINKS (*Oligosoma striatum*). O=SITES WHERE SPECIES IDENTITY IS NOT IN DOUBT AND THERE IS PRECISE LOCALITY DATA; *=SITES WHERE SPECIES IDENTITY IS NOT IN DOUBT BUT THE LOCALITY IS IMPRECISELY KNOWN; ○=SITES WHERE SPECIES IDENTITY CAN NOT BE CONFIRMED AND THE LOCALITY MAY OR MAY NOT BE PRECISELY KNOWN (AFTER WHITAKER 1993).

2.3 REASONS FOR DECLINE

There are no data to show whether striped skink populations in forest habitats have declined (nor whether they are now stable). The loss of indigenous forest cover from the North Island lowlands has undoubtedly led to the extirpation of striped skinks from large parts of their range. Deterioration of forest habitat may have adversely affected striped skink populations. In modified environments, local populations of striped skinks have declined or become extinct as suitable cover (such as old logs) disappears or is cleared during agricultural development.

Striped skinks are preyed upon by feral and domestic cats, and probably by other introduced mammalian predators (mustelids, rats), but the extent to which predation has hastened population declines is not known.

Striped skinks were protected under the Wildlife Act in 1981. Prior to this, populations in farmland in eastern Taranaki were decimated by the activities of lizard collectors, leading to the local extinction of several populations and serious habitat degradation at other sites as logs were broken up or moved. The activities of collectors do not appear to have been a problem in other parts of the species range.

2.4 CAPTIVE POPULATIONS

Ten wild striped skinks collected from Taranaki are currently being held in captivity (August 1997). Five adults (3 f , 2 m) and one sub-adult from the Toko Douglas-Te Wera district and one adult female from Waitaanga are being held by DoC Stratford for research on emergence and daily activity patterns; three animals of unknown age/sex are held by a private herpetoculturist in Rotorua.

3. Biology and Ecology of Striped Skinks



Striped skinks now occur in two structurally very different habitats - lowland forest and pastoral farmland. All of the sites where striped skinks have been found are now or were formerly covered with dense, lowland (<700 m) podocarp/hardwood forest. Although the composition of this forest varied somewhat with latitude, altitude, soil type and climate, the predominant hardwood species appears to have been taws. When these forests were felled for timber or cleared for agriculture some skinks survived to live in remnant stumps or decaying podocarp logs in scrub, waste ground or rough pasture. Some populations colonised exotic plantations and shelter belts. Striped skinks have not been found in coastal or naturally open habitats.

In indigenous forest environments striped skinks appear to dwell in or under logs and litter on the forest floor, and/or to live on larger trees where they inhabit epiphytes, cracks and crevices in dead trunks and limbs, or beneath flaking bark, sometimes as high as the canopy. In farmland they generally live in or under rotting logs and in rank vegetation. Most striped skinks have been found in pastoral farmland but this is partly a function of search effort and partly because such habitats are easier to search.

It is widely accepted that striped skinks are primarily diurnal in their activity but it is still unclear whether they are heliothermic (dependent on radiant energy from the sun) like most other *Oligosoma* species. Although they bask occasionally in captivity they do so far less frequently than their congeners. In the wild there have been remarkably few observations of striped skinks basking even from the prolonged surveillance of known populations. Basking seems to be more frequent in spring and more frequent with gravid females.

Striped skinks seem to be agile climbers and to climb more readily than other New Zealand skink species. Records from the wild show they occur as high as the canopy of lowland forest (10s of metres above ground) and in captivity have been observed spending extended periods up in twigs and foliage. However, the extent to which striped skinks are truly arboreal in habit is still not clear. Nor is it clear whether individual skinks move between the ground and the canopy, and if so, what triggers such movements.

Wild striped skinks have been associated with wet or swampy environments and this is supported by observations on captive animals. A preference for humid or moist micro-habitats is also consistent with the reduced basking activity.

Striped skinks are primarily insectivorous but will consume some soft fruit.

The litter size ranges from 3-8 and the young are usually born during February and March. Growth rates and longevity are unknown, but an adult in captivity has lived for at least 20 years. Adult striped skinks seem very tolerant of sub-adults and juveniles and large (10+), mixed-age/sex groups occur at some sites.

4. Threats to Striped Skinks

4.1 HABITAT DESTRUCTION OR DEGRADATION

Destruction of indigenous forest habitats by logging or clear-felling has reduced significantly in recent years within the known range of striped skink. Large tracts of lowland podocarp/hardwood forests in the north and central part of the North Island are protected by reserve status of some kind but degradation of these habitats nevertheless continues through the impact of browsing herbivores such as possums, deer and goats. It has been suggested this deterioration may affect striped skink populations (Newman & Towns 1985). Possible ways in which it might do so are through drier conditions on the forest floor or longer-term, through changes in forest composition.

Dramatic changes in eastern Taranaki farmland have been recorded in the last 25 years. At best, a micro-habitat largely based on rotting logs in farmland is ephemeral. Natural decay, albeit relatively slow in the case of some podocarp logs, means that within decades these logs will have completely disintegrated and without a surrounding forest there will be nothing to replace them. In reality the natural breakdown of logs and stumps has been greatly accelerated by deliberate destruction during agricultural development, disturbance by livestock or, at some sites, the activities of lizard collectors in turning or smashing open logs to find skinks. Potential habitats such as rank vegetation on waste ground and areas of scrub are also becoming much scarcer as agricultural activities intensify.

4.2 POPULATION SIZE

The limited extent of suitable habitat patches in pastoral farmland means most striped skink populations in such places are very small and isolated. For this reason they are very vulnerable to localised extinction, with little opportunity for re-colonisation.

4.3 PREDATION

In pastoral habitats in eastern Taranaki cats have been recorded eating striped skinks. Cats are very effective predators of lizards (Fitzgerald 1990) and where skink populations are small and isolated cat hunting strategies mean they have the capacity to deplete or remove local populations. Other mammalian predators within the range of striped skinks are mustelids, rats and mice. There are no specific records of these species preying on striped skinks but knowledge of their distribution, abundance and diet suggests that the most damaging might be the ship rat and stoat because of their wide occurrence in forest habitats.

5. Ability of Species to Recover

Most introduced mammalian predators and herbivores have been established in forested habitats in the North Island for more than 150 years, and kiore for very much longer. Although there is no evidence that striped skink populations have declined over this time, neither is there any evidence to suggest that they are stable now. The fact they have been able survive for so long in the presence of these animals means continued coexistence, at least in the short to medium term, should be possible provided new detrimental changes do not occur. Any general management which leads to an improvement in the health of forest ecosystems should also benefit the lizards.

Striped skinks have adapted to modified environments in the pastoral farmland of eastern Taranaki. Some of these populations are living in localities that have been cleared of indigenous forest for more than 100 years. This tenacity in highly modified environments in the presence of introduced predators indicates they can probably cope with predation provided suitable habitat remains available.

Little Barrier Island presents a special opportunity for striped skinks. The only introduced mammals remaining on the island are kiore, and there are plans for their eradication. If successful, this rat eradication campaign will provide more than 3,000 ha of forest habitat free of introduced predators. Lizard populations can recover rapidly when released from rodent predation (Towns 1991 & 1994, Newman 1994); the striped skinks on Little Barrier Island should be amongst several species of lizards there to benefit from kiore removal.

Striped skinks have thrived in captivity, where they have successfully bred and been raised to adulthood. Self-sustaining captive populations would be of value for research during the first period of the recovery plan and perhaps later for re-introduction programmes.

6. Options for Recovery

OPTION 1

Do nothing. Forest populations may continue at the present level or, if not yet stable, may continue to decline slowly. Deterioration of forest ecosystems may lead to a renewed or accelerated decline in striped skink populations; new perturbations in forest ecosystems could have more serious effects. Pasture populations will probably decline to extinction in the short to medium term as habitat pockets are destroyed or degraded.

OPTION 2

Determine the conservation status of the striped skink. This option would involve undertaking research focused on learning enough about striped skink biology and ecology that accurate survey and monitoring techniques can be developed, then applying these techniques to determine the current conservation status. In itself this option would not lead to an improvement in the status of the species but it is an essential prerequisite for establishing what recovery actions if any, are needed.

OPTION 3

Improve general health of forest ecosystem at some sites where striped skinks occur. This could be achieved through broad-scale control of herbivores (e.g. possum poisoning, goat shooting) or through more specific control of a wider range of introduced mammals over a smaller area (e.g. mainland island approach). It is likely to be undertaken as part of more general habitat protection measures aimed at threatened species or environmental protection. This option could lead to stability in striped skink populations in the treated areas, maybe an increase in skink numbers, and perhaps a small increase in the range over which they occur. Little Barrier Island must be regarded as the best possibility for this option because eradication of just one species (kiore) will provide >3,000 ha of habitat freed from the effects of introduced mammals. Little Barrier Island would also provide a site for the study of the species habits and habitat requirements, once kiore were removed. Other intensive habitat management initiatives currently underway could benefit striped skinks, such as the predator management project in the Waipapa Ecological Area in Waikato Conservancy. Such sites could also be used to undertake studies of the habits and habitat requirements of striped skinks.

OPTION 4

Following from Option 3 is the specific management of selected forest sites for striped skinks. This would involve targeting a known population or populations of striped skinks with management specifically designed to improve their situation (e.g. predator/herbivore control, habitat enhancement, artificial cover). This should lead to an increase in skink numbers at the treated sites.

OPTION 5

An extension of Option 4 would be the establishment of new populations at locations where the forest habitat was more easily managed (e.g. transfer to mainland island sites or islands such as Mokoia Island in Lake Rotorua). Populations of *Oligosoma* can be established from a relatively small number of individuals (Thomas & Whitaker 1995). These individuals could be sourced from a captive population or from isolated populations in pasture environments that are otherwise faced with local extinction. This option would lead to a small increase in the range over which striped skinks occur and an increase in numbers.

OPTION 6

Advocacy to encourage farmers in Taranaki (and elsewhere) not to develop or destroy sites where striped skinks occur in pasture environments. Indigenous forest remnants, swamps, and wild places (even if composed almost entirely of exotic plants) may also harbour other significant indigenous plants or animals. Preservation of such sites would help maintain the range and numbers of striped skinks but may be insufficient in itself to prevent extinction if other factors (e.g. predation) are an issue.

OPTION 7

As for Option 6 but including protection and enhancement of some sites where striped skinks occur in a pastoral environment. This option would involve protecting selected sites, and may include planting or other habitat enhancement and/or localised predator control. Numbers of striped skinks should stabilise or increase at the treated sites, and the area covered by the population could increase.

PREFERRED OPTIONS

The preferred options for the duration of this recovery plan are Options 2, 6 and 7. Broad-scale management of some forest ecosystems (Option 3) is already being undertaken and will benefit a wide range of species, including striped skinks. Protection of some pasture populations of striped skinks (Option 7) will

not only secure their future but make readily accessible populations available for the research that is essential for developing medium to long term conservation strategies and goals. If the results of the first five year period show striped skinks are widespread and relatively secure in forest environments it may be possible to discontinue conservation activities for striped skinks in pastoral habitats at a later stage. It is not appropriate to consider Options 4 and 5 given the present level of knowledge of the species conservation status, distribution, and habitat requirements.

7. Recovery Strategy: Goal and Objectives

7.1 LONG-TERM GOAL

The long-term goal of this recovery plan is to ensure the survival in perpetuity of striped skinks in their natural habitat at a number of sites throughout their range, including at their limits of distribution. Measures of success will include an improvement in the species conservation status on either IUCN or DoC criteria (currently vulnerable and Category A, respectively) (Molloy & Davis 1994, IUCN 1996).

7.2 OBJECTIVES

Insufficient information is available on the distribution, ecology and conservation status of striped skinks to enable assessment of the need for a detailed recovery strategy. At present it is not possible to say whether the species is even at risk, let alone how it should be managed for recovery. Accordingly, the emphasis over the first 5-year period of the plan must be on research and survey.

Specific objectives for the first 5-year period of the recovery plan for striped skinks are;

Objective 1. To obtain data on those aspects of the species habitat and habits required to determine distribution and abundance.

Objective 2. Devise specific survey and monitoring methods.

Objective 3. Assess the conservation status and needs.

Objective 4. Initiate an advocacy programme.

Objective 5. Identify specific management options and the locations where they should be implemented.

Objective 6. Initiate and encourage the short to medium term protection of some populations in pastoral habitats.

8. Recovery Strategy: Work Plan

8.1 RECOVERY PLAN OBJECTIVES

The objectives listed here are for the first 5-year period of the recovery plan.

Objective 1. To obtain data on those aspects of the species habitat and habits required to determine distribution and abundance.

Explanation

Fundamental to any conservation or management of striped skinks is a clear understanding of the species ecology and habitat. At present even very basic questions like the extent to which striped skinks are arboreal or heliothermic can not be answered with certainty from existing data. Determining whether or not the species is truly arboreal is the single most important research topic, as the answer will dictate where and how all other research, surveys and conservation management is done.

Action

Prepare a research plan for laboratory and captive animal research.

- Undertake laboratory based research on the activity, behaviour and thermal requirements of striped skinks with particular reference to the diel and seasonal activity patterns which may affect conspicuousness in the field.
- Undertake laboratory based research on the ecophysiology of striped skinks with particular reference to habitat selection and ambient moisture levels.
- Undertake comparative research on captive striped skinks and sympatric *Oligosoma* species with particular reference to activity periods, thermoregulation (basking) and climbing behaviour.
- Undertake field observations to corroborate the results of the laboratory studies and research on captive animals under relatively natural conditions.
- If animals are found in the wild, collect biological and ecological data described in Appendix 2.

Key Personnel

Science & Research Division, DoC; Conservancy Advisory Scientists in Auckland, Waikato, Bay of Plenty and Wanganui; science contracts (University, CRI or private).

Objective 2. To devise specific survey and monitoring methods appropriate for striped skinks.

Explanation

Management for conservation requires the ability to be able to determine accurately a species distribution and density, and to follow population trends. The survey and monitoring methods typically applied to skinks in New Zealand have so far proved largely unsuccessful with striped skinks. The results of the research undertaken under Objective 1 (above) should be used to develop non-disruptive methods of surveying for, and monitoring of, striped skink populations.

Action

- Develop non-disruptive survey methods for locating striped skinks in forest and pasture habitats.
- Develop non-disruptive methods for monitoring the density and distribution of striped skink populations in both forest and pasture habitats.

Key Personnel

Science & Research Division, DoC; Conservancy Advisory Scientists in Auckland, Waikato, Bay of Plenty and Wanganui; Conservancy staff in Wanganui and Waikato; science contracts (University, CRI or private).

Objective 3. To assess the conservation status of, and needs for striped skinks.

Explanation

Management priorities and actions for recovery are dictated by the conservation status of a species and its conservation needs. At present this information is not available for striped skinks. Once the research recommended in Objective 1 (above) has enabled the development of appropriate survey and monitoring techniques for striped skinks (Objective 2) the current status of known populations should be assessed. This assessment should include information on particular risks or threats facing each population and ways in which they could be mitigated.

Meaningful survey results will require consistency, skill and experience. A core person (or two) should be involved on all surveys throughout the range of striped skinks, with additional labour provided by the Conservancies.

Most locality records for striped skinks stem from chance reports from members of the public. New records should be solicited by a widespread publicity campaign in the North Island media. Discovery of new populations, especially beyond the species known range, could affect the conservation status and management priorities.

Part of the understanding of the conservation status is to know whether populations are stable or declining. This will require regular monitoring of a few selected populations, in both forest and pasture habitats.

Apart from the obvious impact of habitat loss, experience with other lizard species has shown predation by introduced mammals is likely to be the most serious threat facing striped skinks. Determination of the magnitude of this threat and ways to mitigate it are critical to the design of effective conservation management. Monitoring the performance of striped skink populations released from predation pressure in other ecological management initiatives (e.g. predator control programme in Waipapa Ecological Area or kiore eradication on Little Barrier Island) or the establishment of special research by management projects for striped skinks are two ways this question could be addressed.

Conservation status and priorities are based to some extent on uniqueness. The phylogenetic relationships of the striped skink are not clearly understood. Earlier studies suggested the striped skink was very closely related to the brown skink (*Oligosoma zelandicum*) (Hardy 1977). The striped skink is the only species not included in recent genetic studies which have resulted in a completely revised phylogeny for the New Zealand lizard fauna (Daugherty *et al.* 1994).

Action

- Survey known locations for striped skinks to determine local population size and status.
- Solicit new records of striped skinks through widespread publicity (see Objective 4, below); investigate all reports of striped skinks.
- Monitor selected striped skink populations to determine population trends and hence the need for action.
- Undertake research to assess the impact of introduced mammalian predators.
- Make a strictly limited number of specimens of striped skinks available for genetic study.

Key Personnel

Science & Research Division, DoC; Conservancy staff in Auckland, Waikato, Bay of Plenty, and Wanganui, and possibly elsewhere; Public Awareness Unit, DoC; science contract for genetic studies (University, CRI or private).

Objective 4. To initiate an advocacy programme for striped skinks.

Explanation

Most of the individuals, and all of the new localities recorded for striped skinks over the last decade have been chance encounters by members of the public, reported to DOC as a result of media publicity. Until a reliable method for finding striped skinks is developed, this remains the best source of information on the species.

Until the conservation status of the species is resolved (Objective 4) and management options identified (Objective 5) there is a need to ensure that at least some of the striped skink populations in pastoral habitats are given interim protection (Objective 6). This will require a diplomatic advocacy programme to ensure that the selected landowners are supportive and fully cooperative.

Currently this applies only to eastern Taranaki but new data may show it is relevant in other districts as well.

Action

- Ensure regular publicity for striped skinks in national and provincial newspapers.
- Publish and circulate a brochure, pamphlet, and/or poster on striped skinks.
- Arrange meetings with landowner and community groups in the target areas (currently eastern Taranaki).

Key Personnel

External Relations Division, DOC; advocacy/public relations staff in Auckland, Waikato, Bay of Plenty, Tongariro/Taupo and Wanganui Conservancies; SCOs (Fauna) from Wanganui Conservancy office, and the Stratford and New Plymouth Field Centres.

Objective 5. To identify specific management options for striped skinks and the locations where they should be implemented.

Explanation

Once the conservation status of each population has been assessed, and the risks facing those populations identified, it will be possible to define meaningful conservation strategies which can secure the long-term future of the species. Clearly it will be impractical to apply conservation management to every striped skink population. Sites will need to be selected which not only provide the best and the most cost-effective opportunities for success but also preserve the geographical range of the species. It may also be necessary to consider establishing new populations by translocation to mainland islands or offshore islands.

Action

- Select key sites for management to secure the long-term future of striped skinks
- Define appropriate management strategies

Key Personnel

Species Recovery Group for striped skinks; Biodiversity Recovery Unit, DOC; Science & Research Division, DOC; Conservancy Advisory Scientists and/or SCO (Fauna) from Auckland, Waikato, Bay of Plenty and Wanganui Conservancies; field staff from relevant Conservancies:

Objective 6. To initiate and encourage the short to medium term protection of some populations of striped skinks in pastoral habitats.

Explanation

Until such time as the conservation status and needs of striped skinks are determined, and long term conservation and management options for them identified, it is important to ensure some of the populations in pastoral habitats are maintained. Natural decay of logs and stumps plus increasing farm development means sites suitable for lizards are becoming increasingly scarce in farmland areas. This will lead in turn to fragmentation, isolation, and local extinction of skink populations. Many of the striped skinks located over the past decade have been found as a direct result of the destruction of their habitat during land clearance. Encouragement to modify farming practices on sites where skinks occur, or to set such sites aside, is a first step to protecting the habitat; research may show that enhancement of the habitat or other management (i.e. predator control) is needed to safeguard the skinks.

Action

- Identify populations suitable for short to medium term protection.
- Encourage preservation of the habitat occupied by skinks through agreement, covenant or purchase.
- Identify and implement other management actions that will benefit the skink population.

Key Personnel

Species Recovery Group for striped skinks; Biodiversity Recovery Unit, DoC; Science & Research Division, DoC; Conservancy Advisory Scientists and/or SCO (Fauna) from Auckland, Waikato, Bay of Plenty and Wanganui Conservancies; field staff from relevant Conservancies.

Continue to next file TSRP24a.pdf
