

THREATENED SPECIES RECOVERY PLAN SERIES NO.11

SOUTH ISLAND SADDLEBACK RECOVERY PLAN
(Philesturnus carunculatus carunculatus)

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ABSTRACT

South Island saddlebacks (tieke) were widely distributed over the South and Stewart Islands in the 19th century. Their rapid decline was documented during the latter 19th century. Following a rodent invasion on their sole remaining island habitat South Island saddlebacks were under threat of immediate extinction. This was thwarted by prompt translocations of remaining birds to nearby predator-free islands. This plan outlines conservation goals and suggests options for continuing the recovery of this subspecies.

Recovery is to be achieved through a programme of island habitat restoration and saddleback translocations. Eradication of rodents and weka is promoted by this plan, in some instances this plan suggests that discussions be held with the local Iwi to determine the appropriateness of these eradications. Saddlebacks are to be introduced or re-introduced to a number of islands around the South Island coast. When recovery has been achieved South Island saddleback populations may be established on up to 26 islands with a total of about 4000 individuals. At this population level they will not be ranked as threatened, but be classified as rare and no longer requiring a programme of on-going intensive conservation management. Recovery management proposed in this plan will be undertaken jointly by Department of Conservation staff, Iwi representatives and members of the public.

LONG TERM GOAL OF THIS RECOVERY PROGRAMME: To maintain and enhance the existing populations of South Island saddleback, and to improve the conservation status of the subspecies from endangered to rare through the re-establishment of four former populations and the establishment of up to 12 new populations by the year 2020.

Cover photo: Department of Conservation files

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1. INTRODUCTION

The South Island saddleback (*Philesturnus carunculatus carunculatus*) or tieke is a member of the endemic New Zealand wattlebird family the Callaeidae. It is closely related to the North Island saddleback (*P. c. rufusater*) which is classified as rare (Bell 1986). Other members of this family are the endangered North Island kokako (*Callaeas cinerea wilsoni*), the near-extinct South Island kokako (*Callaeas cinerea cinerea*) and the extinct huia (*Heteralocha acutirostris*). The South Island saddleback is listed by Bell (1986) as an endangered endemic subspecies with a very limited distribution. Although most saddleback populations appear to be stable, the small number of island populations, each of which has few individuals, indicates that 'endangered' is still an appropriate classification.

The saddleback is a medium sized (25 cm), forest dwelling passerine. Adults of both sexes have similar plumage, the main feature of which is the conspicuous chestnut-coloured saddle on the bird's back. Males have larger wattles than females. Young birds less than 15 months old have quite different plumage to adults. They are entirely dark brown, and have small wattles. The imprint of the saddle forms by the end of the birds' second moult. These juveniles are known as "jack-birds". This distinctive juvenile colour phase is absent in the North Island subspecies in which the young assume the "saddleback" marking before they leave the nest.

Of the eleven islands where saddlebacks now occur nine are protected under the Titi (Muttonbird) Island Regulations 1978 and, except for Beneficial Owners, an entry permit is required from the Department of Conservation (DOC). Permits under these regulations are issued on the recommendation of the Rakiura Titi Committee. The tenth island where saddlebacks occur, Breaksea, is a Special Area (entry by permit only) of the Fiordland National Park and is managed by DOC. The remaining island, Motuara, where saddlebacks have only recently been liberated, is a Scenic and Historic Reserve with free public access.

It is proposed that a Recovery Group be formed to oversee saddleback recovery. Its function will be to oversee and co-ordinate the recovery process, to advise DOC on any changes to the Recovery Plan and to liaise with the people involved. The Recovery Group should comprise the following members:

- * a nominee of the Regional Conservator, Southland,
- * a nominee of the Regional Conservator, Nelson,
- * a nominee of the Manager, Threatened Species Unit,
- * an aviculturalist with saddleback management experience,
- * a scientist with knowledge of saddleback, and
- * a nominee of the Rakiura Titi Committee (Rakiura Maori).

2. DISTRIBUTION

2.1 Past Distribution

At the time of European colonisation of New Zealand, saddlebacks were present throughout the South Island from Stephens (Takapourewa) and D'Urville Islands in the north to Stewart Island and the Big South Cape Island group in the south (Oliver 1955). Their former abundance throughout this range is unknown but saddlebacks were apparently not uncommon. South Island saddlebacks may have occurred on several islands adjacent to the mainland such as Codfish (Whenua Hou) (3 km) and Inner Chetwode (Nukuwaiata) (2.7 km) in the same way that N.I. saddlebacks occurred naturally on several more remote offshore islands such as Hen (Taranga) (10 km offshore), Cuvier (Repanga) (30 km offshore) and Little Barrier (Hauturu) (24 km offshore). Lovegrove (1992) has suggested on this evidence that N.I. saddlebacks may have occurred on the majority of northern islands which were connected to the mainland during the last glaciation and it may be likely that a similar situation existed in the south.

As noted by 19th century observers, saddlebacks declined during the second half of last century. By about 1900 South Island saddlebacks were endangered and close to extinction everywhere except on three islands off the southwest coast of Stewart Island: Big South Cape Island (Taukihepa) (936 ha), Pukeweka (2 ha) and Solomon Island (Rerewhataupoko) (25 ha).

In August 1962 ship rats (*Rattus rattus*) invaded Big South Cape Island. This caused the extinction of the greater short-tailed bat (*Mystacina robusta*), Stewart Island snipe (*Coenocorypha aucklandica iredalei*) and Stead's bush wren (*Xenicus longipes variabilis*) and the local extinction of the lesser short-tailed bat (*Mystacina tuberculata*), Stewart Island robin (*Petroica australis rakiura*), banded rail (*Rallus philippensis assimilis*), Stewart Island fernbird (*Bowdleria punctata stewartiana*) and South Island saddlebacks (Bell 1978).

While the decline and extinction of saddlebacks on the South and Stewart Islands can be attributed to the combined effects of several introduced predators; Norway rat (*Rattus norvegicus*), ship rat, feral cats (*Felis catus*) and mustelids, in particular stoats (*Mustela ermina*); the extinction of saddlebacks on the Big South Cape Islands was caused by ship rats alone (Bell 1978). Several of the mammalian predators which have been introduced to New Zealand are capable of exterminating saddlebacks, e.g. stoats are presumed to have caused the extirpation of translocated saddleback populations on Maud and Motukawanui Islands (Bell 1983, Lovegrove 1992). Over most of the former mainland range of saddlebacks at least four of these predators may be present (cats, stoats, ship rats and Norway rats). Current knowledge and technical expertise however, does not provide for effective or efficient exclusion of predators from large areas of mainland forest.

2.2 Present Distribution

2.2.1 Wild Populations

Following the rat invasion and irruption on the Big South Cape Islands an attempt to rescue saddlebacks, snipe and wrens was undertaken in 1964. Unfortunately attempts to transfer snipe and wrens failed but 15 saddlebacks were successfully translocated to Kaimohu Island and 21 to Big Island (Pohotairia). This action saved the subspecies from certain extinction (Merton 1975). Subsequent translocations have been undertaken to establish saddleback populations on eleven other islands (Nilsson 1978). The majority of these appear to have been successful. On predator-free islands saddlebacks have increased in number quickly and have soon filled the available habitat.

Translocations to sites where predators have been present have generally been less successful. Inner Chetwode Island and Maud Island in the Marlborough Sounds, Putauhinu Island adjacent to Big South Cape Island and Motunui and Jacky Lee (Pukeokaoka) Islands in Foveaux Strait, are all sites with either kiore (*Rattus exulans*) and/or weka (*Gallirallus australis*) present. The combined effects of weka and kiore on Inner Chetwode Island may have prevented saddlebacks from establishing, although the transferred birds may have also suffered from stress associated with the capture and transfer. On Maud Island a stoat invasion in 1982 caused the local extinction of saddlebacks. On Putauhinu Island the effects of kiore predation and/or competition may be a limiting factor for saddleback colonisation. On both Motunui and Jacky Lee Islands weka are numerous and may be having a detrimental effect on saddlebacks as the saddleback populations have not increased at the same rate as on non-weka inhabited islands. On Kapiti Island weka are known to prey on saddleback fledglings (Lovegrove 1992).

The current total population of about 650 birds is descended from the survivors of the 36 saddlebacks translocated in 1964. South Island saddlebacks now occur on nine islands around Stewart Island, one island in Fiordland, and one island in the Marlborough Sounds. Populations range in size from c12 to c180 birds. The number of breeding pairs on each island is unknown. The islands range in size from 6 to 170 hectares and total 523 hectares (Table 1). Some of the islands with saddlebacks present have not been surveyed recently and thus some of the information shown in Table 1 may not be accurate. Of the eleven existing populations, those on Motuara, Breaksea and Putauhinu Islands are yet to be confirmed as being successfully established. Four saddleback inhabited islands, (Kaimohu, Betsy, Womens (Pikomamaku) and North) adjacent to Stewart Island are very small, isolated and difficult to reach. They support few saddlebacks and have only been used infrequently as source islands for translocations during the saddleback recovery programme to date. The most important saddleback populations are located on Big and Kundy (Kani) Islands. At present these two islands support approximately 50% of the total population but comprise less than 10% of the total habitat.

2.2.2 Captive Population

South Island saddlebacks have been held in captivity by a private aviculturalist since the early 1970s. Although the birds have bred on several occasions they have been unable to raise young through to adulthood. At June 1994, two pairs of adult saddlebacks were held.

TABLE 1: DISTRIBUTION AND STATUS OF SOUTH ISLAND SADDLEBACKS

ISLAND	STATUS	SIZE (ha)	PREDATOR	TRANSFER	LAST CENSUS	FUTURE POPULATION
Big	C	23	-	1964, (21)	1992, (180)	180
Kaimohu	B	11	-	1964, (15)	1978, (30)	30
Inner Chetwode	NR	190	K,W	1965, (30) 1969, (16)	X	X
Betsy	C	6	-	1969, (16)	1976, (12)	12
Womens	B	8	-	1972, (20)	1988, (25)	25
North	C	8	-	1972, (19)	1988, (30)	30
Putauhinu	C	141	K	1974, (23) 1976, (23) 1984, (41)	1991, (20)	280?
Kundy	C	19	-	1978, (38)	1992, (180)	180
Maud	SR	309	W'S	1980, (34) 1982, (38)	X	X
Motunui	C	48	W	1981, (20)	1991, (60)	120?
Jacky Lee	C	30	W	1986, (46)	1991, (65)	100?
Breaksea	NP	170	-	1992, (59)	1992, (59)	340?
Motuara	SCR	59	-	1994, (24)	-	100?

KEY: C = Crown Titi Island, B = Beneficial Titi Island,
 NR = Nature Reserve, SCR = Scenic Reserve, SR = Scientific Reserve, NP = National Park
 K = Kiore W = Weka S = Stoat X = Liberation Failed

3. ECOLOGY

No detailed study has been undertaken of the ecology and behaviour of South Island saddlebacks. Some general comments may be made, however from various unpublished sources and observations. Many aspects of the ecology of South Island saddlebacks are probably similar to that of the well studied northern subspecies (Lovegrove 1992).

A forest dwelling species with poor powers of flight, saddlebacks are often encountered in pairs or in family groups. They are noisy and appear to be sociable. Saddlebacks are now restricted to a few offshore islands which comprise a very small (possibly atypical) remnant of their former range. Habitats on these islands are very simple, composed of a few dominant shrub hardwood species and occupied seasonally by thousands of breeding seabirds. Saddlebacks may roost in a variety of places such as rock cavities in cliffs, beneath clumps of ferns and epiphytes, or even in structures such as muttonbirders buildings (as on Big Island). Most roosts are sited within two metres of the ground.

Saddlebacks are omnivorous, feeding on insects, fruit and nectar. The strong chisel-like bill is an effective tool for taking insects from decaying wood and for digging in the leaf litter.

Nesting occurs from October to late December, and two young are usually raised. Nests are often on or close to the ground in clumps of ferns (Oliver 1955). Some nests have been found in muttonbirders' huts. One would assume that multiple broods are possible in the one season as in North Island saddlebacks. In the north this has been commonly observed when saddlebacks are colonising "new" islands following translocation.

4. THREATS TO LONG TERM SURVIVAL

4.1 Predation

The rapid reduction in the range of saddlebacks by about 1900 and confinement to the Big South Cape Island group, and their subsequent extinction there in the 1960s indicates that saddlebacks are highly vulnerable to introduced mammalian predators (Atkinson 1973, 1985, Bell 1978, Lovegrove 1992).

At present the most serious risk to the continual survival of saddlebacks is the introduction of rodents to any of the islands where saddlebacks occur. This threat has been well recognised since the 1962 rat invasion and irruption on the Big South Cape Islands. The main groups of island users who might inadvertently transport rodents to islands include management and research teams and muttonbirding parties. Rodents may gain access into packed stores and equipment, or stow away on boats or helicopters landing at the island(s). Foreign or local fishing boats which may hold rodents, mooring adjacent to, or becoming wrecked on these islands or adjacent rocks also represent a threat.

4.2 Habitat Loss

Fire is also a risk, particularly during the muttonbirding season when people are resident on some of these islands. The combination of factors, including people on the islands, peat soils and frequently windy conditions, contributes to a high fire risk. This risk could normally be offset by the cool and humid conditions which generally prevail on the Titi Islands.

4.3 Disease

The outbreak of disease is a threat to the survival of saddlebacks and wherever possible precautions should be taken to minimise disease risks. Two actions which may carry associated risks are the introduction of domestic poultry to some Titi Islands, and the use of equipment such as bird transfer boxes, mist nets, etc. that may have been in previous contact with infected species.

5. ABILITY OF THE SPECIES TO RECOVER

South Island saddlebacks have considerable potential to recover to a less threatened status if further conservation management is undertaken. They breed quickly and rapidly colonise suitable predator-free island habitats. They also readily use artificial roost and nest sites. Roost/nest boxes may be used to enhance the suitability of shrubland habitats which may otherwise be unsuitable (Lovegrove 1992). Saddlebacks are vocal and conspicuous and these features facilitate monitoring the success of translocations. Unfortunately so far there has only been limited success with translocations to islands where kiore are present (i.e. Putauhinu), and captive breeding has not yet shown its full potential to assist with this recovery programme. The main thrust of future conservation efforts should be to concentrate on translocations to rodent-free islands. However behavioural manipulation (e.g. providing roost and nest boxes) may result in co-existence with kiore on some islands, and the existing captive breeding programme should be refined and expanded. There is clearly considerable potential to take advantage of recently developed methods of removing pest mammals from islands, and improved translocation and avicultural techniques to the benefit of this programme.

6. OPTIONS FOR RECOVERY

Five options for recovery are presented. They range from doing nothing to establishing saddlebacks on up to 16 additional islands around the South Island coast. The objectives set out for option 2 (i.e. the maintenance of existing populations) should be included in options 3 to 5, however the priorities of objectives for each option differ slightly. All of the management options are achievable; however, the time required to achieve the goals may vary between options. Size of potential island habitats is used as a measure of the recovery potential of each option.

Option 1. No management. This option is unacceptable because it fails to allow saddlebacks to recover from their current endangered status. A consequence of no management could be a decline in the numbers of saddlebacks. If the translocations to Breaksea and Putauhinu Islands prove to be unsuccessful the do-nothing option may well lead to the extinction of the subspecies; i.e. if these two populations fail to establish, the total population of this subspecies will be represented by small populations which are vulnerable to extinction. Failure to successfully colonise Breaksea and Putauhinu Islands would result in the loss of 311 ha of the present potential habitat, or a decline of 67%.

Option 2. All management to be concentrated on existing saddleback populations. This option seeks to maintain the status quo, but does little to achieve the goal of improving the conservation status of the subspecies. The objectives of this option would be: to provide effective rodent and disease quarantine measures for all saddleback habitats, to ensure that saddlebacks successfully colonise Putauhinu and Breaksea Islands, to monitor the condition of and threats to other existing populations, to continue to develop the captive breeding potential and to negotiate with Rakiura and Ngai Tahu muttonbirders of Motunui and Jacky Lee Islands to seek agreement to remove the introduced weka from those islands. If this option is pursued saddlebacks would probably continue to occupy 11 islands and some of the existing populations may increase. This option perhaps represents the absolute minimum that should be undertaken to promote the conservation of this subspecies. This option fails to address the need to increase the number of habitats and thus does not serve to improve the conservation status of the subspecies and populations would remain vulnerable to local extinctions. The subspecies would not be secure and would therefore require on-going management.

Option 3. Establishment of four further populations on islands in widely separate areas within their former geographic range. Selection of this option would take advantage of one recently successful rodent removal project (Motuara Island - a translocation to this island has recently taken place), one partially completed (Ulva Island (Te Wharawhara)), and two proposed rodent removal projects (Inner Chetwode and Bench (Waitaua) Islands). These island restoration programmes have been initiated independently of this recovery plan. This option is regarded as realistic and achievable. The result would be four large self-sustaining saddleback populations in addition to the existing smaller island population. This would bring to 14 the number of islands occupied by saddlebacks and would represent an increase of about 140% on the present area of occupied habitat. This option is preferred in the short

term. Option 3 differs from option 2 in that it represents a practical step towards improving the conservation status of the subspecies through establishment of self-sustaining populations on large islands. At this stage, the conservation status could be elevated from endangered to vulnerable.

Option 4. Restore saddleback populations to four islands within their known former range. This option represents the medium to long-term view of saddleback recovery and aims to continue the elevation of the conservation status of the subspecies. This option is to restore saddlebacks to island communities of which they were once part. Fulfilment of this option would require the successful re-establishment of saddlebacks on the Big South Cape group of islands and on Stephens Island. Discussions should be initiated with Rakiura, Ngai Tahu, and Ngati Koata to investigate opportunities in this regard. The continuation of the restoration of Stephens Island is fully supported. Reintroduction of saddlebacks to these islands would see an increase in habitat occupied by saddlebacks of some 230%.

Option 5. Establish up to 16 further saddleback populations on islands within their former geographic range. This is a long-term option for the saddlebacks recovery programme. It seeks to improve the conservation status of saddlebacks to rare. At this status saddlebacks would no longer require a programme of manipulative management (aside from monitoring) and recovery would be achieved. Such a status would be comparable with that of North Island saddleback, where although only 11 islands are occupied, they cover some 6712 ha, with a population estimated in 1992 to be c. 4400 and expected to reach about 9000 at the projected capacity for each island (Lovegrove 1992, P. Jansen pers. comm.).

This option includes all of the islands listed in options 3 and 4 and also includes islands from the following list: Long, Outer Chetwode, Maud, Titi (all in the Marlborough Sounds), Passage, Chalky, Entry (all in Fiordland), and Codfish Island (Stewart Island). If all of the islands listed above were available for saddlebacks this would give a 960% increase in area of distribution and a total of 26 islands would be occupied, with a total area of 4934 ha. More stringent selection criteria are required to refine this list (see Appendix 1 and Towns et al. 1990), however this should be regarded as an achievable long term option. Introduction of saddleback to some of these islands may not be considered ecologically appropriate after detailed consideration.

The **preferred short-term option** (3), together with the objectives set out in option 2 could be met within 5 years of the approval of this plan. The medium- and long-term options (4,5) require careful evaluation and refinement by the Recovery Group before implementation commences.

7. RECOVERY STRATEGY: GOAL AND OBJECTIVES

LONG-TERM GOAL OF THIS RECOVERY PROGRAMME: To maintain and enhance the eleven existing populations of South Island saddleback, and to improve the conservation status of the subspecies from endangered to rare through the re-establishment of four former populations and the establishment of up to 12 new populations by the year 2020.

This plan promotes the recovery of the South Island saddleback through a process of ISLAND RESTORATION and SADDLEBACK translocation. A total saddleback population of about 4000 birds could be reached. At this level, the subspecies would be regarded as rare rather than endangered. This would require saddlebacks being established on the majority of islands listed in this plan. Key islands for future populations will be Ulva, Inner Chetwode, Motuara, Bench, Codfish, Taukihepa, Solomon, Pukeweka and Stephens. The re-introduction of saddlebacks to areas within their former range is a key element in this recovery strategy.

The introduction of saddlebacks to other "new" island habitats should proceed in accord with ecological restoration goals of these sites. The first step is to secure the subspecies by establishing populations on a number of large predator-free islands. Having secured the subspecies, efforts should then focus on restoration of saddlebacks to areas of their known former range. The final stage is to carry out further translocations of saddlebacks to elevate the status of the subspecies to rare. For the five year term of this plan Ulva, Inner Chetwode, Motuara and Bench Islands are the preferred sites for saddleback introductions.

GOALS FOR THIS PLANNING PERIOD: To maintain and enhance the eleven existing wild populations of South Island saddleback, and to improve the conservation status of the subspecies from endangered to vulnerable through the establishment of four "new" populations within five years.

OBJECTIVES:

- 1. Maintain the eleven existing wild populations of South Island saddlebacks.**
- 2. Remove predators from selected islands suitable for saddlebacks.**
- 3. Translocate saddlebacks to rodent-free islands.**
- 4. Maintain a saddleback population in captivity for advocacy purposes.**
- 5. Promote public interest and involvement in the recovery of saddlebacks and their habitats.**

8. RECOVERY STRATEGY: WORK PLAN

To meet each objective and to fulfil the recovery goal the following work is required for the five-year period of this plan:

OBJECTIVE 1. TO MAINTAIN THE EXISTING WILD SADDLEBACK POPULATIONS.

Aim

To protect the nine existing wild saddleback populations on the Titi Islands and the populations on Breaksea and Motuara Islands.

Explanation

To safeguard the progress achieved to date in saddleback recovery and to allow for further advances in their recovery the existing wild populations will require protection against the threats which they face. Protection of these existing saddleback populations will require adoption of stringent rodent quarantine measures coupled with an active monitoring programme for all populations and their habitats.

Plan

- * DOC staff are to ensure that stringent predator, weed and disease quarantine measures are applied for all of their visits to islands where saddlebacks occur. This includes controlling public access (if appropriate), setting conditions on the transport of people and stores, and the development of contingency plans.
- * To enhance communication with island owners (Rakiura Maori and Ngai Tahu) and other users in order to advocate and standardise rodent control measures and to maintain the ecological health of these islands. It is important to this programme that existing contacts and goodwill which exist between DOC and Rakiura Maori are maintained and developed.
- * With the help of the owners of Putauhinu Island the saddleback population introduced to this kiore-inhabited island should be monitored at least every two years to assess the success or otherwise of this translocation. The Breaksea and Motuara Island saddleback populations will also be monitored in conjunction with other ecological monitoring undertaken on the island. If it appears that the recent translocations were unsuccessful then the reason for the failure of the transfer should be identified before any further releases are attempted. Regular monitoring of these populations will also provide information on how soon they may be "cropped" for birds for further translocation.
- * In conjunction with Rakiura Maori, DOC staff should visit Titi Islands where saddlebacks are present in order to survey populations and to check on the presence or absence of rodents or any other species of note. These records should be maintained in an island database. Islands not visited for any other saddleback management purposes (cropping for transfer, etc.), should be

monitored at five year intervals. Kaimohu and Betsy Islands have a high priority for visits, as they have not been visited since 1978 and 1976 respectively.

Outcomes

Maintenance of the existing saddleback populations will achieve:

- * A reduction in the risk to saddleback populations from possible rodent invasion, weed colonisation and disease outbreak.
- * Provision of an accurate assessment of the size of the saddleback populations on Putauhinu, Breaksea and Motuara Islands.
- * Provision of accurate data on the status of each saddleback population.

Key Personnel

DOC, Southland Conservancy

DOC, Nelson Conservancy

Margaret Bragg - Rakiura Maori Titi Committee, Bluff.

OBJECTIVE 2. TO REMOVE PREDATORS FROM ISLANDS SUITABLE FOR SADDLEBACKS.

Aim

To remove predators from two islands on which saddlebacks are currently present and three islands to which it is proposed to establish saddlebacks.

Explanation

An important part of the rehabilitation and restoration of island ecosystems involves removing introduced predators (Veitch & Bell, 1990). Effective techniques have been developed to remove rodents from islands up to c.200 ha (Thomas & Taylor, 1991) and trials on larger islands utilising modified techniques are either underway or have been proposed. Techniques have been developed for removing of weka populations but little work has been undertaken on removal of stoat populations or on measures to prevent recolonisation. To improve the status of saddlebacks further predator removal operations are required. This will enable saddlebacks to be re-established in additional parts of their former range (e.g. Fiordland, Marlborough Sounds). Removal of weka populations may include translocation of wekas to other more appropriate sites where their predatory habits will have less impact on vulnerable species.

Plan

- * Discussion should be initiated between DOC and the Rakiura Maori over the desirability of removing the introduced weka from Jacky Lee and Motunui Islands and to promote the restoration of their original communities.
- * Remove Norway rats from Ulva Island.
- * Remove kiore and weka from Inner Chetwode Island.

- * Remove Norway rat and weka from Bench Island.
- * Advocate for the future removal of predators on all islands mentioned under option 5 of this plan, including discussion with Rakiura Maori and Ngai Tahu on the removal of ship rats from the Big South Cape Island group (this plan does not propose or support the removal of weka from the Big South Cape Island group because of their cultural and kai value to Rakiura Maori).
- * Support research into predator removal projects generally.

Outcomes

The success of these predator removal projects proposed will:

- * Free Jacky Lee and Motunui Islands from the effects of predation by weka, this should allow an increase in the saddleback populations and enable more successful cropping of saddlebacks for future translocations.
- * Free Ulva Island from the effects of predation and competition by Norway rat.
- * Free Inner Chetwode Island from the effects of predation and competition by kiore and weka.
- * Free Bench Island from the effects of predation and competition by Norway rat and weka.
- * Allow the translocation of saddlebacks to Ulva, Inner Chetwode and Bench Islands to be proposed and evaluated.

Key Personnel

DOC, Southland Conservancy

DOC, Nelson Conservancy

Margaret Bragg - Rakiura Titi Committee, Bluff.

OBJECTIVE 3. TO TRANSLOCATE SADDLEBACKS TO RODENT-FREE ISLANDS.

Aim

To translocate saddlebacks to four rodent-free islands and to promote their successful colonisation.

Explanation

Translocating saddlebacks to rodent-free islands is the most efficient and cost-effective method of achieving species recovery. Methods of capture, transfer and release have been developed and refined over the past 25 years. Provided habitats on recipient islands are suitable most translocations using existing techniques are successful (Griffith et al. 1989, Lovegrove 1992).

Plan

Following removal of predators from the islands identified under Option 3 of this plan each island should be thoroughly investigated for saddleback translocations and a proposal formulated using DOC's Translocation Guidelines. Due to ecological constraints and the need for a restoration plan to be developed for each island, introduction of saddleback may take place at a later date than anticipated.

At present four saddleback populations are considered large enough to use as sources for saddleback translocations. These are on Big, Kundy, Jacky Lee and Motunui Islands. In future other saddleback populations may be "cropped" to provide birds for translocations.

The following tasks should be undertaken within this planning period:

- * Translocate at least 40 saddlebacks to Ulva Island in Year 2 and undertake post-release monitoring.
- * Translocate at least 40 saddlebacks to Inner Chetwode Island and/or Motuara Island in Year 3 and undertake post-release monitoring.
- * Translocate at least 40 saddlebacks to Bench Island in Year 4 and undertake post-release monitoring.

Outcomes

- * The successful establishment of four new saddleback populations.
- * An increase in the area of saddleback distribution by 639 ha, or about 140%.
- * The establishment of two saddleback populations in the Marlborough Sounds.
- * The establishment of saddleback populations on islands with easier access and which can be used more readily for source populations of future translocations.

Key Personnel

DOC, Southland Conservancy
DOC, Nelson Conservancy
Margaret Bragg - Rakiura Titi Committee, Bluff.

OBJECTIVE 4. TO MAINTAIN A SADDLEBACK POPULATION IN CAPTIVITY.

Aim

To maintain captive management skills and provide saddlebacks for advocacy purposes.

Explanation

Current avicultural knowledge has resulted in birds being kept for considerable periods (by a private aviculturalist) and young being raised from time to time but not in sufficient numbers to sustain a captive population.

The value of captive breeding is recognized in terms of advocacy and learning more about captive management of the species. At present, however, captive breeding is not necessary to assist recovery of South Island saddlebacks in the wild. They are now present on eleven islands and due to be transferred to others. Therefore captive breeding is currently given a low priority.

The most efficient use of a captive population will be for an advocacy programme developed at a captive-breeding institution. Saddlebacks have many features which make them ideal subjects for interpretive display. They are active during the day, have visual appeal, are highly vocal, are endangered and the history of their conservation (particularly the effects of predators on islands) would provide a valuable advocacy component to this recovery programme.

Plan

- * Birds from the translocation programme may be made available to the aviculturalist who is currently breeding saddleback, in order to maintain two breeding pairs. No further birds will be available however to increase the size of the captive population.
- * No further private aviculturalists will be permitted to begin breeding S.I. saddlebacks.
- * Progeny from any captive breeding that does occur will be transferred to a recognized captive breeding institution. This will allow for public viewing and provision of interpretative material. A contingency plan will be developed should large numbers of progeny become available.

Outcomes

- * Successful breeding by captive saddlebacks and survival of progeny so that the captive population becomes self-sustaining.

Key Personnel

DOC, Southland Conservancy

Jeanne Lobb - Gorge Road, Southland.

Captive Breeding Co-ordinator - DOC, Threatened Species Unit.

OBJECTIVE 5. TO PROMOTE PUBLIC INTEREST AND INVOLVEMENT IN THE RECOVERY OF SADDLEBACKS AND HABITAT RESTORATION.

Aim

To promote saddleback recovery through information distribution, iwi and general public involvement and public display of saddleback.

Explanation

This recovery plan requires an active advocacy programme which deals with several issues. The objective is to raise the public profile and appreciation of this species and its habitat as part of the recovery programme. There are three key audiences for this advocacy: (1) the Rakiura Maori and Ngai Tahu who are the owners of the Titi Islands; (2) people who during the course of their normal activities travel to predator-free islands (e.g. DOC managers, scientists, fishermen, muttonbirders, and recreationalists); and (3) the general public who have an interest in conservation.

Consultation with Rakiura Maori is of prime importance in any dealings with Titi Islands and their conservation values. These islands are of immense value to the owners. DOC also regards their conservation values as internationally important. Actively promoting the partnership between Rakiura Maori, DOC and boat users is vital to the saddleback recovery plan. Local Maori should be involved in the further refinement of this recovery programme. The active involvement of Rakiura Maori, and other Iwi (as appropriate) should also be sought for any management issues on saddleback islands such as rodent removals, saddleback transfers and island surveys.

Plan

- * The progress made so far in the recovery of the SI saddleback is a good example of an Iwi/DOC relationship working for conservation benefits. This relationship should be strengthened and developed. It has become a standard procedure that all DOC expeditions to the Titi Islands include a Rakiura Maori, (whenever possible, a muttonbirder from the island being visited). This has been of benefit for both the Iwi and DOC, and should be continued.
- * Continuing developments in the field of rodent removal should be discussed with the Rakiura Maori, particularly in relation to the long term objective of reintroducing saddlebacks to Big South Cape Island.
- * During all saddleback recovery programme operations, every opportunity should be taken to publicly promote the work. There is likely to be ample scope for public participation in field work during various phases of restoration projects and translocations. The public and the media should be invited to view releases where ever possible. This recovery programme lends itself particularly well to public promotion and, where land status permits public participation.
- * The translocation of saddlebacks to Motuara Island and the proposed translocation to Ulva Island will provide a valuable advocacy opportunity. Both islands are scenic reserves and therefore have unrestricted right of public

access. Public access will however need to be combined with comprehensive pest quarantine programmes.

- * The establishment of aviaries accessible to the public with a display of South Island saddlebacks along with detailed interpretation of the conservation issues involved.

Outcomes

- * Development of a sound partnership with Rakiura Maori and Ngai Tahu in saddleback recovery.
- * Promotion of the saddleback recovery programme to the public, and identification of opportunities for public participation in "hands-on" conservation work.
- * Development of a public display facility for captive saddlebacks.
- * Annual reporting of progress in saddleback recovery to Regional Conservators and Director, Protected Species Policy Division, in such a form that the information is able to be easily disseminated to other species managers and the public.

Key Personnel

DOC, Southland Conservancy

Captive Breeding Co-ordinator - DOC Threatened Species Unit.

9. RECOVERY STRATEGY: CRITICAL PATH

Year	Maintain Populations	Predator Removal	Translocation	Captivity	Advocacy
One	Quarantine precautions, Monitor Breaksea.	Ulva, Inner Chetwode		Maintain 2 pair	Promote species recovery
Two	Monitor Breaksea, Kaimohu.	Discussions on Jacky Lee & Motunui.	Motuara from north Titi group		as above
Three	As above, assess cropping potential	Bench	Ulva from Big and Kundy		as above
Four	as above		Bench from north Titi group	Maintain and breed	as above
Five	as above			as above	as above

10. RECOVERY STRATEGY: COSTS

Year	Maintain Populations	Predator Removal	Translocation	Captivity	Advocacy
One	Monitor Breaksea as part of separate project	Not funded by this programme		staff time only	staff time only
Two	Kaimohu staff time 1 weeks				
Three	Breaksea as above		Ulva \$3,000 + staff time 4 weeks		
Four			Bench \$7,000 + staff time 4 weeks		

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APPENDIX 1. Selection Criteria For Islands As Potential Saddleback Habitat.

For an island to be considered a suitable candidate for saddleback translocation the following criteria have to be met:

1. No predatory mammals apart from kiore (to be clarified, pending results of Putauhinu Island monitoring) and mice (*Mus musculus*).
2. Lie more than 1.2 km offshore from any area with stoats or 0.5 km offshore from any area with rodents to prevent colonisation by predators capable of swimming to islands.
3. Have sufficient areas of forest and scrub habitat of reasonable diversity. (Rodent-free, seabird inhabited islands of 6 ha. and 8 ha. have been successfully colonised by saddleback).
4. No browsing mammals, or if present fence them out of forest areas.
5. No fauna (e.g. endangered invertebrates) which would be threatened by saddleback predation.
6. Saddleback introduction should not foreclose any future options for releases of other more endangered fauna or other plans for the release island (e.g. poison drops in which saddleback could be a vulnerable non-target species).
7. Be inside former range of South Island saddleback (i.e. no North Island offshore islands, unless a catastrophe has made all other southern islands unsuitable).
8. Have appropriate status to ensure long term protection (i.e. public land as part of DOC estate, or if privately owned, protected by a conservation covenant).
9. Be accessible for post-release monitoring, and in some cases for educational and recreational visits by public.

* These are preferred but not necessary requirements.
(after Lovegrove, 1992).

APPENDIX 2. Islands Suggested As Potential Saddleback Habitat.

ISLAND	SIZE (ha)	STATUS#	DISTANCE OFFSHORE (km)	PREDATORS^	REGION	POTENTIAL POPULATION
Ulva	270	S.R. & Freehold	0.5 km	Norway rat, weka	Stewart Is.	540
Inner Chetwode	190	N.R.	2.7 km	kiore, weka	Marlborough	380
Bench	120	N.R.	2.6 km	Norway rat, weka	Stewart Is.	450
Big South Cape	936	Titi Is.	3.0 km	ship rat, weka	Stewart Is.	1872
Pukeweka	2	Titi Is.	3.0 km	ship rat, weka	Stewart Is.	4
Solomon	25	Titi Is.	3.0 km	ship rat, weka	Stewart Is.	50
Stephens	120	N.R.	3.1 km	none	Marlborough	240
Codfish	1396	N.R.	3.0 km	kiore	Stewart Is.	2792
Entry	40	N.P.	1.0 km*	stoat, weka	Fiordland	80
Titi	31	N.R.	1.8 km	none	Marlborough	62
Long	140	S.R.	1.7 km	kiore	Marlborough	280
Outer Chetwode	81	N.R.	0.5 km	weka	Marlborough	162
Maud	309	Sci.R.	0.9 km*	stoat, weka	Marlborough	618
Passage	200	N.P.	1.1 km*	stoat	Fiordland	400
Chalky	550	N.P.	1.1 km*	stoat	Fiordland	1100

S.R. = Scenic Reserve, N.R. = Nature Reserve, Sci.R. = Scientific Reserve, N.P. = National Park.

* Unless a technique for "stoat proofing" islands is developed these islands will not be suitable.

^ Any island with either ship rat or Norway rat will require an eradication programme. The effects of kiore on saddlebacks have yet to be clarified, however the overall conservation values of islands with kiore would be greatly enhanced if these rats are removed.

APPENDIX 3. Rakiura Maori (Muttonbirders) Who Have Experience With Saddleback Projects:

Margaret Bragg, (Big Island) 206 Foyle St. Bluff

Jim Leader, (Solomon Island) Marama Ave. North No 9 R.D., Otatara

Russell & Teresa Trow, (Kundy Island) 90 Marine Parade, Bluff

PUBLISHED RECOVERY PLANS

South Island saddleback (\$20)	Approved 1994
Takahe (\$20)	Approved 1994
Dotterel (\$20)	Approved 1993
Tuatara (\$20)	Approved 1993
Mohua (\$20)	Approved 1993
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Chevron skink (\$20)	Approved 1993
Black stilt (\$20)	Approved 1993
Whitaker's and robust skinks (\$20)	Approved 1992
North Island kokako (\$20)	Approved 1991
Kiwi (\$15)	Approved 1991
Yellow-eyed penguin	Approved 1991
Available: from Otago Conservancy, Department of Conservation, Dunedin	
Blue duck (\$10)	Approved 1991
Available: <i>Science & Research Internal Report No.30</i> Science & Research Division, Department of Conservation, Wellington	
Kakapo	Approved 1989
Out of print	

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