

PROPOSAL FOR THE ESTABLISHMENT OF A NORTHERN
STEWART ISLAND RECREATIONAL HUNTING AREA

J. Delaney

THE RHA PROPOSAL

The area under consideration for RHA status is all that State forest north of a straight east-west line drawn between Ocean Beach and Leask Creek excepting that small parcel of State forest opposite Prices Point on the south side of Patersons Inlet. Whitetailed deer are the animal to be managed for recreational hunting. Red deer are incidental but will be included because they occur in the north western forests, particularly around the Ruggedy Mountains. Red deer densities are low.

The map appended to this report showing land tenure on the island depicts this line. The map itself is derived from a report by Purey-Cust and McClymont (1978).

It is considered by Southland Conservancy that this proposal meets the criteria laid down by the National Recreational Hunting Advisory Committee for the selection and setting aside of Recreational Hunting Areas. The final section of this report makes a recommendation in this vein subject to certain qualifications.

In summary we believe this is a suitable RHA proposal because:

- (1) The area under consideration is State forest and therefore under our immediate jurisdiction.
- (2) The area has been monitored over a number of years and has a low whitetailed deer population. Permanent forest plots have been established and the vegetation assessed. The density of animals and the condition of the vegetation is considered to be in balance and within the criteria laid down for RHAs.

- 3) The recreational hunting of whitetailed deer on Stewart Island is an established activity.
- (4) The facilities required for the management of the RHA such as track and hut systems are already established and access either by sea, to the more remote areas, or track to those closer to hand, is good.

Animal and Vegetation Surveys

A number of major surveys of northern Stewart Island have been undertaken by Southland Conservancy with the area also being included as part of an FRI grasslands survey. The following is a summary in chronological order of what these surveys found.

1975

Two surveys were undertaken that year. The first, undertaken by Conservancy, was a full reconnaissance and animal survey of the forests and shrublands of northern Stewart Island. The survey was reported by Williamson (1976).

The animal results are shown in Table 1 and the appended map. Highest relative densities for the surveyed area were obtained on the western coast (10.0%), most probably because of a combination of favoured habitat and remote locality. The northeast coast (Lee Bay - Smokey Beach) showed moderate densities (8.5%). Densities for the Freshwater catchment were low. The Rakeahua Catchment showed higher densities immediately adjacent to South West Arm and moderate on the river flats. Otherwise densities were low.

Analysis of pellet frequency data indicates that whitetailed deer show a distinct preference for low altitude coastal habitat. Relative densities here were higher than for any other habitat zone (10-15%). Deer were found not to be using that habitat above 250 metres altitude. The coastal forest receives the greatest use and the preferred species

are found to be; broadleaf, supplejack, Coprosma species, wineberry, Pseudopanax species, and pate.

The second survey was conducted by FRI (Ilam) and covered the alpine and lowland grasslands. It was reported by Evans and Fine (1976). This survey assessed the impact of introduced animals on the grasslands as minor to nil, with an estimate of pellet densities as less than 12.

1976

Following the 1975 survey and 1976 report a selection of permanent vegetation plots was established to monitor trends in the major vegetation types. These plots were remeasured in December 1981 and provide the only information available on vegetation trends. Although the survey and resurvey data are still to be prepared for computer processing a summary analysis has been undertaken for this paper.

The plots sample the six major forest types in the northern area; manuka, podocarp cutover regeneration, white pine and three associations of podocarp/rata/kamahi. All are assessed from their basal area and stem density statistics as being in good condition.

The influence of an assessed deer density on the regeneration of canopy, important shrub tier and preferred species can be assessed by comparing regeneration trends with deer density data. For the area within which these plots occur deer densities have declined from 8.5% in 1975 to 2.7 in 1981... Correspondingly over the same period the changes in regeneration composition and density have been slight. In the cutover regeneration type preferred and canopy species densities remain high as in 1976, with some on growth to the next size class. The podocarp/rata/kamahi types still retain their moderate densities of preferred and non preferred saplings and seedlings. The only clear trends which stand out from the analysis at this stage are that there has been no decline in understorey condition since 1976 and that Coprosma foetidissima (stinkwood), one of a range of palatable shrubs, is actively increasing

as seedlings grow onto saplings within the browse tier.

1981

A full animal and vegetation survey of forests and shrublands in northern Stewart Island was carried out by Conservancy staff during the summer of 1980/81. As yet the report is not completed. (Note the 1976 permanent plots were also remeasured in 1981).

This survey described the composition and structure of the forests, assessed forest condition and established a more robust sample of permanent vegetation plots to monitor long term trends. It also sampled animal densities and distributions.

The animal pellet survey indicated that

1. Overall mean pellet densities are at low levels and would be assessed as very low when compared with the survey results for south eastern Stewart Island, see Table 1.
2. Overall mean pellet density has been reduced in all blocks since 1975. The greatest reduction has occurred on the West Coast 10.0% down to 2.7. The extent of the reduction is due in part to a moderately successful helicopter operation and the fact that remoteness and a previously low recreational hunting pressure had allowed animal densities to remain at a slightly higher level than elsewhere in the north.
3. Animal usage is greatest in the coastal scrub and water-fern associations. Rata/kamahi, manuka and cutover podocarp associations are also favoured. The lowland podocarp association is receiving low but widespread use.
4. The greatest use in altitude is the less than in a zone. There is a significant drop off in density above 100m. Nothing was recorded above 100m.

a summary there has been a significant reduction in animal density over the entire survey area to a level that is now considered to be acceptably low. Helicopter hunting has been primarily responsible for the reduction along the western coast and to a lesser degree along the coastal fringes (see Table 4 for kill returns). Animals still favour the low altitude forests (coastal scrub, rata/kamahi and cutover podocarps) despite the heavy hunting pressure there, with a lesser density in the lowland podocarp forest.

All forest associations show a response to lower deer densities. The coastal scrub and lowland forest that was showing extensive depletion is now showing recovery and palatable species are evident on the ground, as seedlings or unbrowsed epicormics (broadleaf and stinkwood as well as tree ferns). The cutover podocarps are showing reasonable podocarp regeneration and palatables are present.

There is one vegetation type which needs to be given special mention and that is the coastal water fern association which has developed along the northern coastline. The original forest type here was a rata/kamahi association but this was destroyed during the decade 1950-1960 by natural exposure factors, as has happened on Bench Island. Possums may have played some minor role, and this is currently under investigation by FRI. Current research, especially that of Bench Island, has shown that the role of deer in these exposure induced dieback situations is to inhibit forest recovery. On the north western coastline a 20 - 100 m band of water fern and Uncinia/Cortaderia has developed. Tree seedlings are slowly growing up through this cover but deer densities will need to be kept around the present level for any longer term changes to occur. It should be noted that such a change is not necessary from a soil and water conservation or erosion point of view.

FRI RESEARCH PROGRAMME

The Protection Forestry Division of FRI is currently undertaking animal and vegetation research on south eastern Stewart Island. The areas involved are Bench Island and the coastal section between Ocean Beach and Port Adventure.

The research involves projects on whitetailed deer, possums, vegetation, and the interactions between them and natural factors, such as exposure. A number of papers have been published.

Points which should be clarified as regards animal and vegetation condition within this research area and that in the proposed RHA are:

- (1) Whitetailed deer densities are much lower, mean 2.3% as compared with a mean of 27% for the research area, see Table 1.
- (2) And that as a consequence vegetation condition is much better. With reference to the report of Veblen and Stewart (1980) the condition of the vegetation in the proposed RHA could be considered as being closer to that of Bench Island than the Chew Tobacco section of Stewart Island which was used as the main island comparison.

The point to note is that Chew Tobacco, and indeed the whole south eastern coastline as far south as Kopeka River, with its very high animal densities and depleted forests is not comparable with the situation in the northern half of Stewart Island. The only useful comparison is to indicate for a particular forest type the consequences of prolonged high animal densities.

Commercial Helicopter Hunting

Commercial hunting would cease in that area of State forest gazetted as an RHA. For this reason the present role of

helicopter venison recovery needs to be evaluated.

The 1975 survey can be seen as an indicator of the situation with no helicopter hunting as it predates active sustained commercial recovery.

The reductions which have occurred between 1975 and 1981 can be attributed to commercial hunting, particularly in the west and Freshwater/Rakeahua, and to a gradual increase in recreational hunting pressure.

The assessment could therefore be made that to remove the commercial recovery component is likely, in the more remote area, especially, to result in an increase in animal density back to something less than the 1975 level. Less because the recreational hunting pressure has increased since then. For this reason it will be necessary to monitor these areas closely and should an imbalance between animal densities and vegetation condition occur then action will need to be taken. A Wild Animal Control Plan would prescribe firstly for an increased or concentrated recreational hunting effort. If this was not effective then restricted commercial helicopter recovery operations would need to be considered.

A point that should also be noted is that Tables 2 and 4 do not relate to the same areas. Table 2 is for State forest in northern Stewart Island and Table 4 is for all Crown land on Stewart Island open for commercial recovery, of which the areas covered by Table 2 are a part.

A final point to consider on helicopter hunting is that removing the northern State forests by putting them into an RHA may remove so much of the favourable hunting country as to make operations elsewhere on the island uneconomic.

HUNTING PERMITS, RETURNS, KILLS

Reference here is given to the data in Tables 2 and 3, extracted by G. Hickley, F.R.I. Ilam from records kept by the Forest Service, Halfmoon Bay. Information is for the past three years.

The number of permits issued over the past three years show a slight increase, however, if account is taken of permits not taken up, the number of parties hunting has remained relatively constant, although the total number of hunters has slightly increased.

The total man weeks being spent on the block has increased significantly from 272 in 1979 to 374 in 1981. This corresponds to a similar magnitude increase in number of deer killed 182 - 250 over the three years. Kills per man week has remained constant over the period and so this increase can be attributed to the greater time being spent on each block by the parties. The percentage of kill returns received is very high and increasing for the northern Stewart Island block. 76% in 1979 increasing to 88% in 1981 is extremely high when compared to other parts of the country (30 - 50%).

An analysis of the origin of hunters indicates that approximately half of permit applications (see Table 3) received were from the Southland/Otago region with a significant proportion of these coming from Invercargill. The other half were spread throughout the rest of the South Island and North Island or further afield overseas. This is important in considering establishment of a R.H.A. as proximity to a large urban population (Invercargill and Dunedin) is one criteria. However the Stewart Island whitetail herd is of interest to hunters from all over the country and this is reflected in these figures.

At present hunters in the northern sector of Stewart Island are a minority group compared with the total number of people

that travel to that area.

	<u>1979</u>	<u>1980</u>	<u>1981</u>
No. hunters	314	283	363
No. trampers signed in			
Visitors Centre (Halfmoon Bay)	1516	1463	1536

Spot checks at Port William indicate that a large proportion of trampers will walk as far as Port William from where a decreasing number continue on round the Northern Circuit. Numbers drop significantly past Christmas Village so that only several hundred will complete the entire round trip.

An RHA is unlikely to alter the present situation and RHA status would not prejudice the activities of other recreational users.

ACCESS

Access to northern Stewart Island is well serviced. Stewart Island has a regular daily air service that is backed by a ferry service that crosses the Foveaux Strait daily over a restricted Christmas period and up to three times a week for the remaining year. Both services are reliable weather permitting with the ferry providing a lower cost method of transport (\$13.50 single fare cf. \$29.00 by air).

On the Island access to many coastal blocks can be arranged by sea with either of two concessionaires. Costs are not expensive but may need to be split between a number of hunters. Again this is weather dependent but is in general reliable.

For those who prefer a cheaper trip an extensive track and hut system is maintained in the northern Stewart Island. Tracks follow the coast from Halfmoon Bay round to Doughboy Bay giving access to all coastal blocks and a track through the Freshwater Catchment and out to Halfmoon Bay via North

arm provides access to the remaining blocks. Nine huts have been strategically placed along these tracks with a number of bivvy shelters as well. Although these are used by hunters, camping may be required for some blocks for more effective deployment of time i.e. to avoid a long walk to and from the hunting block to the hut.

AREAS OF CONFLICT

1

There are a number of possible areas of conflict. These are discussed below.

- (1) The central portion of the proposed RHA area, but which is not included within it, is Nature Reserve. This land is under the jurisdiction of the Department of Lands and Survey and is dedicated to the preservation of flora and fauna. A permit to enter is required. To propose an RHA around such an area may seem anomalous. However Forest Service surveys in 1975 and 1981 have found that white-tailed deer are very much confined to the lower lying coastal and foothill country in State forest around the reserve. This is basically a habitat factor in that it is in these areas that the relatively favoured coastal hardwood, rata/kamahi and podocarp/hardwood vegetation types occur. Further inland the terrain rises steeply into the reserve and the vegetation type changes rapidly into dense subalpine shrublands. This habitat is not favoured by deer. As a comparison the deer densities within the coastal forests are of the order of 53 frequency whilst within the subalpine shrublands it is much less than 13.

Above the subalpine shrublands are the alpine grasslands of the Anglem complex and outlying ranges, such as the Paps. It would be fair to say that deer are almost completely absent from this area. Conservancy surveys have yet to record a deer presence. Evans and Fine (1976) noted that there was very little use of the alpine grasslands by deer and that when a comparison was made between the present vegetation communities and those recorded by Cockayne (1909) little or no modification was present. Two main reasons for the absence of deer in the alpine grasslands are the underlying 1000 feet plus of dense subalpine shrubland through which deer must move and the harsh exposed nature of the grassland habitat.

To summarise, a gazetted and properly administered RHA in the State forests within which deer densities were maintained close to present levels would pose no threat to the values of the nature reserve.

- (2) There are a number of small blocks of Crown land surrounded by State forest, such as at Christmas Village, which in the longer term should be rationalised to State forest but which in the short term would need to be excluded from the RHA. There are in addition larger areas of Crown land, such as the Ruggedy flat and Island Hill run, which while initially excluded should be discussed as is appropriate at a later stage for possible inclusion. The Wild Animal Control Act (1977) caters for this possibility.
- (3) Conflict with other recreational users is mentioned, but is not expected to be a problem. The area proposed has a long history of recreational hunting and this activity has meshed well with the interests of other users.
- (4) The RHA proposal also needs to be viewed against the background of the interests and involvement of the local Stewart Island population, their concern with the administration of Crown owned lands, and also the aspirations of the recreational hunting fraternity.
- (5) The RHA proposal may meet opposition in some quarters as it would mean a more active involvement in the management of the State forests, the wild animals and the recreational users of the forest over and above what is currently undertaken. The Department of Lands and Survey and the Forest Service seldom agree on what their respective roles on the Island should be.

RECOMMENDATIONS

On the basis of the following facts,

- (1) The State forests of the northern half of Stewart Island meet the criteria for selection as an RHA.

- (2) The animal and vegetation balance appears acceptable. This is confirmed by the 1980/81 survey which has been analysed and is currently being written up. The final report will be published in September 1982.
- (3) There may be interdepartmental implications for an RHA proposal.

IT IS RECOMMENDED THAT

- (1) The NRHAC approve in principle the establishment of an RHA for the State forests, previously defined, for the purpose of hunting whitetailed deer.
- (2) That this proposal be confirmed upon the NRHAC receiving the final report from Southland Conservancy following the analysis, interpretation and write-up of the 1981 survey and resurvey.
- (3) That the NRHAC convey to the Minister of Forests its intention to seek RHA status for the State forests defined, subject to (2) above, and that the Minister of Lands be informed of this decision.

M.J. Cuddihy

M.J. Slater

Forester

27 July 1982

TABLE 1

STEWART ISLAND DEER PELLET FREQUENCIESNorthern Stewart Island

	<u>1975</u>	<u>1981</u>
North East Coast		
whitetailed	8.5%	2.9%
red	-	0.2%
West Coast		
whitetailed	10.0%	2.7%
red	-	0.3%
Freshwater		
whitetailed	5.0%	1.4%
red	-	0.5%
Rakeahua		
whitetailed	-	2.3
red	-	1.0

Southern Stewart Island (whitetailed only)

	<u>1976</u>	<u>1977</u>
Ocean Beach-Port Adventure	22%	27%
Port Adventure-Lords River	37%	33%
Lords River-Kopeka River	18%	16%
Kopeka River-Port Pegasus	3%	(not done)
Overall (for same area)	22.9%	23.9%

TABLE 2

HUNTING STATISTICS FOR NORTHERN STEWART ISLAND

(combined figures for the 16 blocks north of Paterson Inlet)

	1979	YEAR (JAN-DEC) 1980	1981
No. of parties hunting	128	126	141
No. of permits not taken up	7	34	13
No. of permits issued*	135	160	159
Total no. of hunters	314	283	363
Total man-weeks on block	272	290	374
Kill-returns received	761	781	881
Deer reported killed	182	173	250
Kills per man per week	0.67	0.61	0.67

* Permit applications can be received up to 12 months in advance. However, a permit is not issued unless a confirmation is received within 3 months of the proposed trip.

TABLE 3
ORIGIN OF HUNTERS APPLYING FOR BLOCKS
ON NORTHERN STEWART ISLAND*

LOCATION:	NO. OF PERMIT APPLICATIONS	MEAN NO. OF HUNTERS PER PARTY	APPLICATIONS CANCELLED PRIOR TO PERMIT BEING ISSUED
Stewart Island	3	2.0	-
Invercargill	14	2.5	1
Southland/Otago	77	3.1	14
South Island (excl. Southland/Otago)	42	3.6	11
North Island	37	3.7	3
Overseas	9	1.7	2
Unknown	8	-	-
Total	190	3.2	31

* Addresses given by hunters making a written application for a block during 1981 were used as a sample.

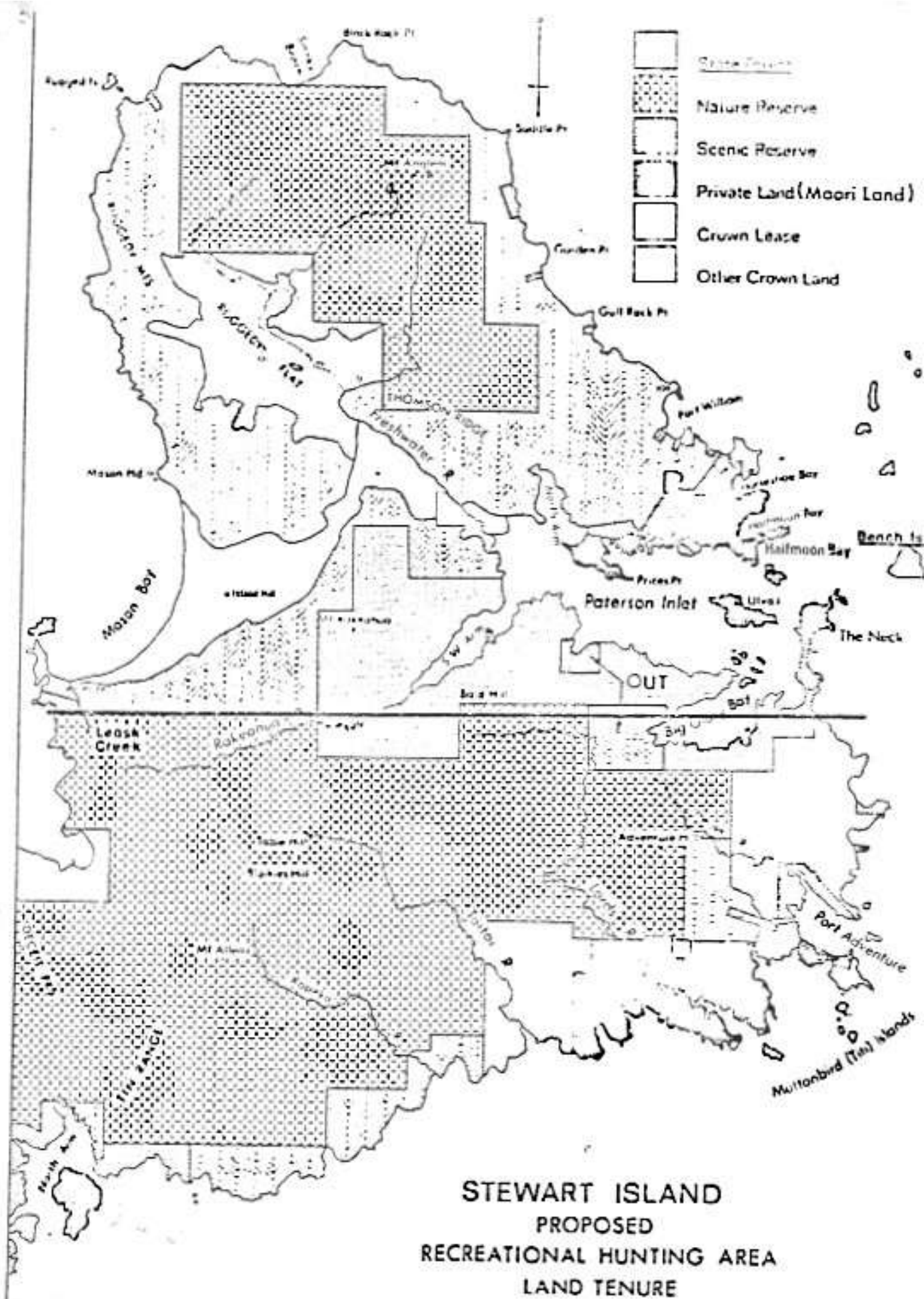
TABLE 4

HELICOPTER/KILL RETURNS

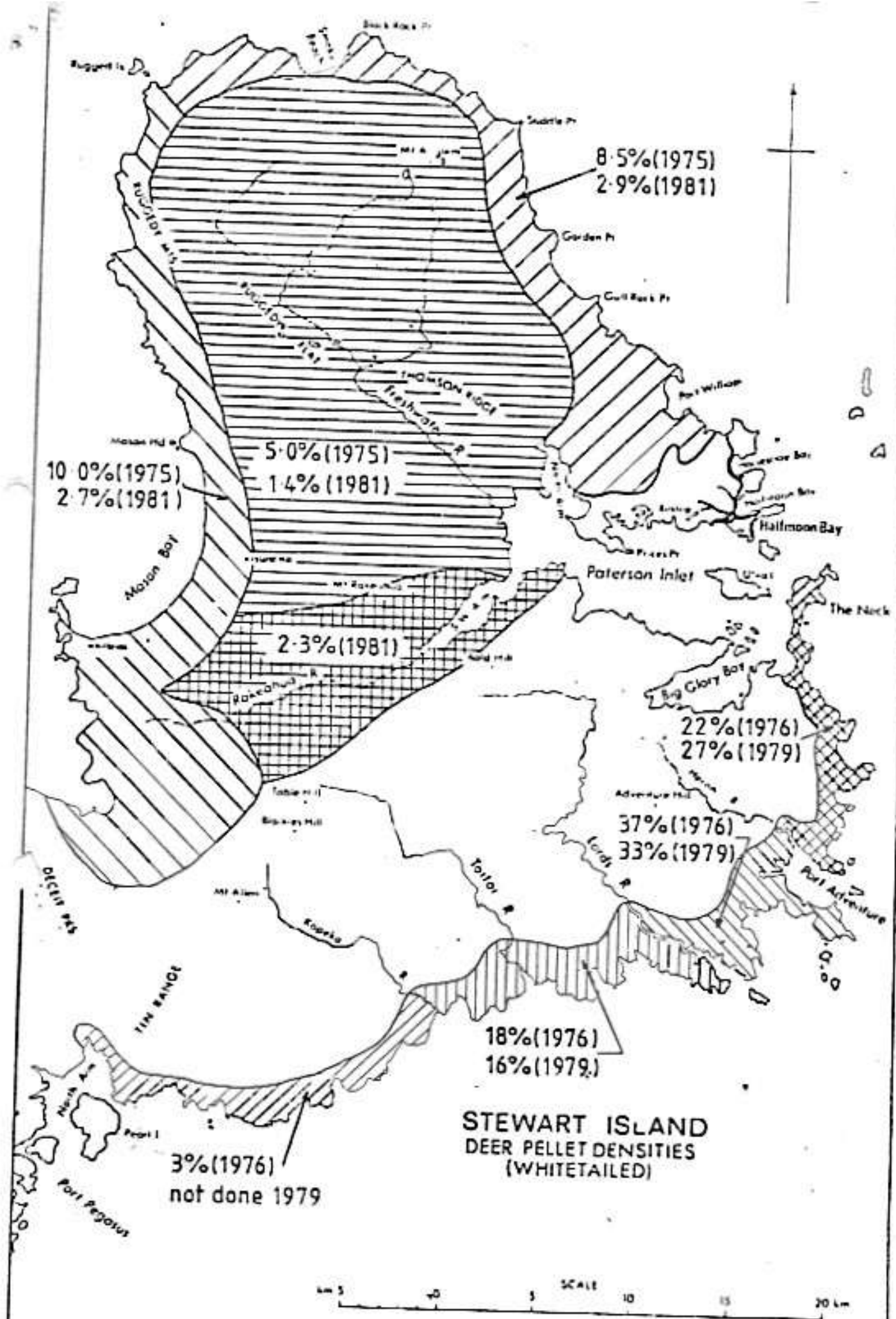
	<u>Red</u>	<u>Whitetail</u>	
1980 April	-	-	
May	-	-	
June	-	-	
July	-	-	
August	-	-	
September	-	-	
October	-	-	
November	7	39	
December	7	117	= 170
<hr/>			
1981 January	4	23	
February	4	27	
March	3	32	
April	3	56	
May	3	22	
June	-	-	
July	-	-	
August	-	-	
September	?	? No Return	
October	?	? No Return	
November	3	77	
December	5	23	= 285
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1982 January	2	37	
February	-	27	
March	-	-	
April	-	-	
May	-	-	= 66
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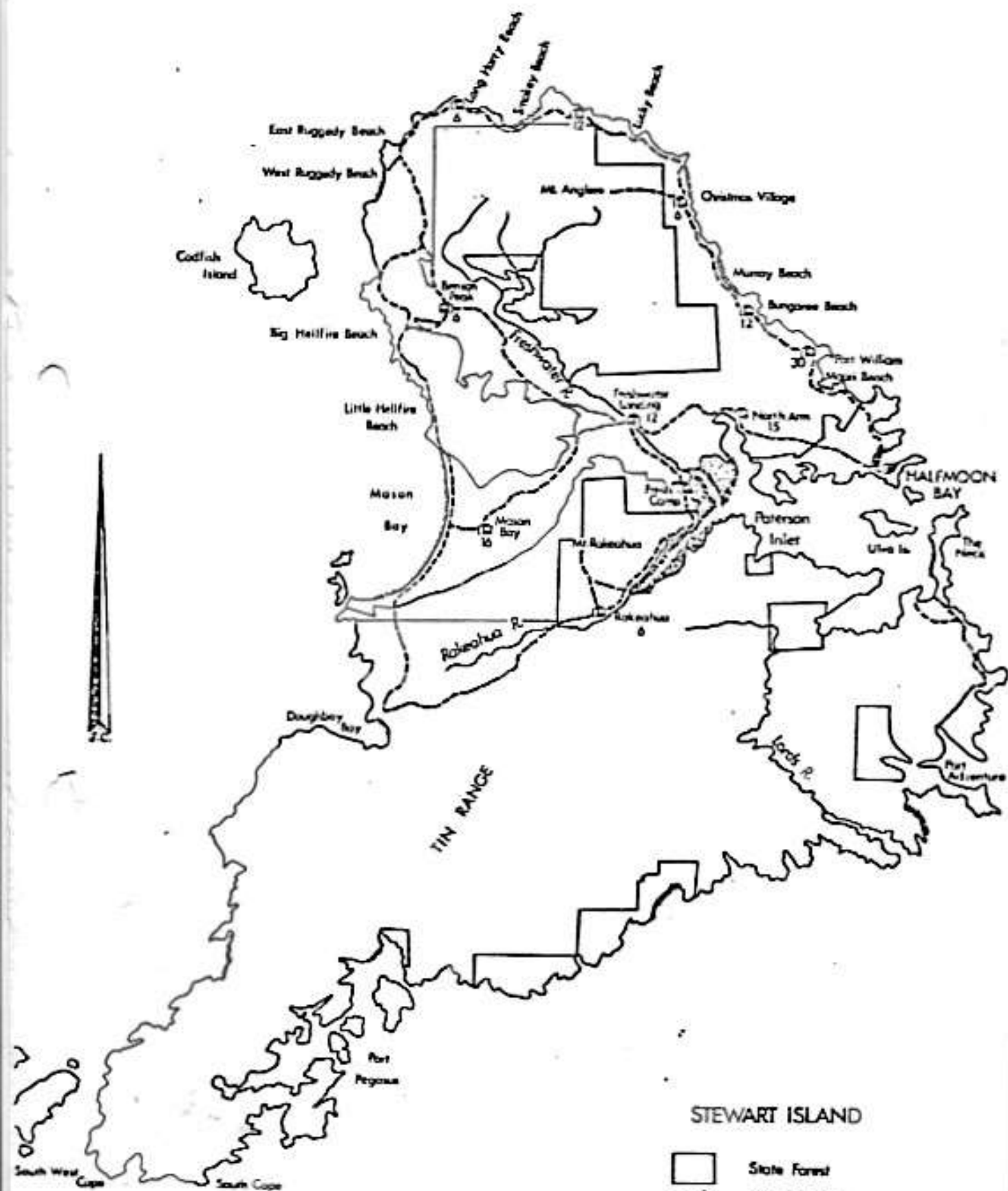
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km 5 0 5 SCALE 10 15 20 km





STEWART ISLAND



State Forest



Walking Track



Hut & Bunk No.



Hunting Area Proposed On Stewart Island

HALFMOON BAY

A public meeting was held at Stewart Island on Sunday to gauge local opinion about the proposed establishment of a recreational hunting area on the island's north coast.

However, members of the public present were outnumbered by the seven members of the National Recreational Hunting Advisory Committee, the assistant commissioner of Crown lands in Southland and New Zealand Forest Service personnel.

Established in 1978, under the Wild Animal Control Act, 1977, the committee is appointed by the Minister of Forests to advise him on the establishment and administration of recreational hunting areas and to promote and encourage recreational hunting.

The committee chairman, Mr Ken Myers, is the director of environmental forestry with the Forest Service. He explained to the meeting that, to qualify as a RHA, an area must be able to be administered so that there is a balance between recreational hunting and other uses, and animal numbers must be such that they can be controlled mainly, but not necessarily exclusively, by recreational hunting.

In reply to a statement from the floor that animal control in other areas was probably of more concern to those present, committee member, Mr Chris Challies, said the establishment of a recreational hunting area would not affect Forest Service policy in other areas.

Whitetail

If the northern coastal strip being considered by the committee is gazetted as a recreational hunting area, it will be the first in New

Zealand featuring whitetail deer.

A private member of the committee, Mr Ralph Blanchard, considered that this area had in practice been a recreational hunting area for years, an opinion which was supported by the members of the public present.

State Forest Land

Although an RHA can be established on land of any tenure except national park, the senior ranger for the Forest Service's Southland conservancy, Mr Kerry Mawhinney, said the only area they were entitled to talk about at present was State forest land.

Mr McGowan admitted that the tenures on Stewart Island were "an absolute mess" being mainly the result of historical accident, but he warned that, before any land in reserves could be considered for incorporation into an RHA, it was the Department of Lands and Survey's job to ensure that any values apparent in them were taken into account.

A committee member, Mr Jack McKenzie, described the northern coastal strip as one of the two most attractive potential RHAs that he had seen.

A report on the vegetation and animal numbers in the northern area, prepared by the Forest Service eighteen months ago, identified large areas of water fern, now up to two metres tall, and probably induced by deer browsing.

Because of this, the area was not now conducive to high deer numbers, Mr Myers said.

Steep Terrain

The terrain there is much steeper than on the south-east coast, where deer numbers are higher, and the Deerstalkers' Association representative on the committee, Mr Howard Egan, expressed concern that the success rate of hunting parties might be very low, especially on their first visit.

Compared to the south-east coast and Paterson's Inlet, there is less scope for fishing and diving by hunting parties in the northern

area, because the coastline is more exposed.

When asked about the possibility of a recreational hunting area being established on Maori land on the south-east coast, Mr Myers said he had no confidence that the committee could persuade the owners and hence they would have to approach the committee of their own volition before this could be considered.

One Third

The Forest Service ranger on Stewart Island, Mr Ron Tindal, said that at present one-third of the hunting on the island was on the northern coast.

Mr Tindal considered the proportion must soon change, however, because access to hunting areas on the south-east coast had been limited by the Maori owners who, unlike the Forest Service, charge permit-holders for hunting rights.

If an RHA were to be established, the committee was sure more hunters

would come to Stewart Island, especially from northern areas and Australia. The committee considered, however, it was conjecture to suppose an increased proportion would use the RHA.

Trampers

A conflict between an increased number of hunters and trampers using the northern track would not arise, Mr Mawhinney said.

Although the area was well serviced by huts, the Forest Service would consider establishing more permanent camp sites along the coast, he said.

At the meeting's conclusion a warning was sounded by a committee member, Mr Don Cummings, that Stewart Islanders should not take it for granted that they were always going to have the best whitetail hunting in the southern hemisphere, and that it could change, even next year.

Southland Times 9/3/84

Rakiura Land

Sir, — Please permit me space to comment on a report in The Southland Times, March 8 1984, concerning a meeting at Stewart Island convened by the National Recreational Hunting Advisory Committee. During the course of the meeting an officer of New Zealand Forest Service was reported as saying that the owners of Maori land on Stewart Island made a charge for hunting rights. This is incorrect, Rakiura Maori Land Incorporated, the trustees of the land in question, do not charge a hunting fee.

There was something about this meeting I could not understand although the south-east area was considered to contain more deer than anywhere else, still New Zealand Forest Service was prepared to attract hunters away from there to the northern part of the island where deer are fewer, on the premise of erecting huts to accommodate them. Another thing, would it not have been politic and even courteous, that if the meeting intended to debate the lands under the jurisdiction of Rakiura Maori Land Inc as they did, to at least issue an invitation to them to be present, or even to notify them the meeting was to take place?

H. F. Ashwell

Honorary Secretary
Rakiura Maori Land Inc

Bluff

Southland Times 16/3/84.

Hunting Blocks Booked

HALFMOON BAY

Hunting blocks on Maori land on Stewart Island's south-east coast have been solidly booked from January to at least August.

The lands trustee, the Rakiura Maori Land Incorporated, administers 16 hunting blocks covering about 11,000 hectares between the Neck and Toitoti river.

Further land belonging to the incorporation at Port William, Murray river, Masons Bay and Ruggedy is not at present being used for hunting blocks.

The incorporation's secretary, Mr H. F. Ashwell, of Bluff, disputed that they charged hunters for a permit as was stated at a meeting of the National Recreational Hunting Advisory Committee on Stewart Island on March 4.

However, he said they did charge a management fee of \$10 a person per week to cover expenses such as telephone calls, stationery and postage.