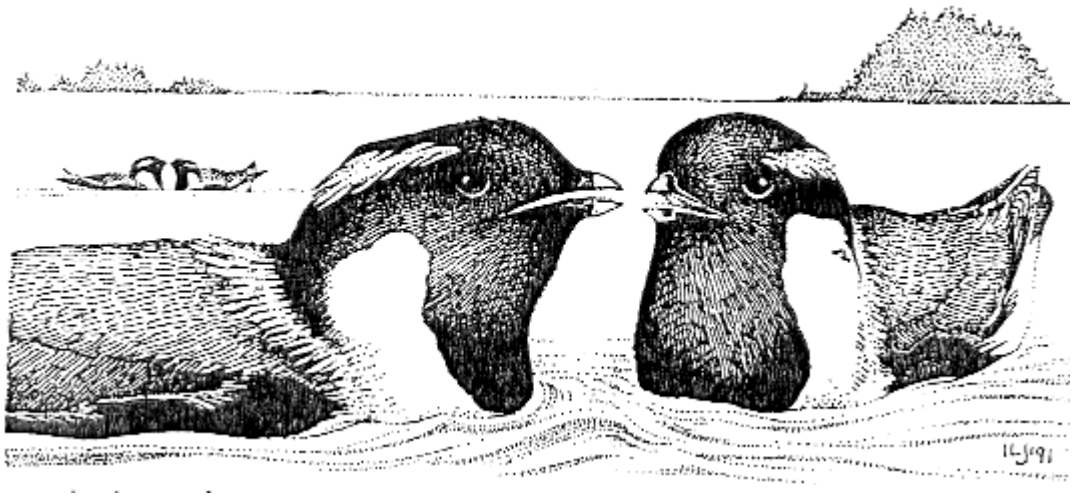
LASKEEK BAY CONSERVATION SOCIETY

REPORT FROM THE 1997 FIELD SEASON

Submitted by:
Jo Smith
Interpreter / Biologist



1. SUMMARY

This year marked the eighth field season on East Limestone Island, involving 160 volunteers and visitors from Haida Gwaii and around the world. The season spanned 15 weeks, from April to July, with individuals participating in scientific research, walking on guided tours or joining us to conduct some of their own biological studies. Volunteers helped us to continue the Ancient Murrelet research, with burrow monitoring and adult and chick banding the core projects. As in previous years, we were able to continue to band Black Oystercatcher chicks, census Glaucous-winged Gull nests and conduct seabird surveys in the waters and islands of Laskeek Bay. Further investigations of Red-Breasted Sapsucker nest ecology were made this year, as well as observations of raptor and songbird nesting throughout the island. An insect collection was started, adding a new component to our ecological education, and a comprehensive plant list was compiled for the island, adding to the work done in previous years. With the help of so many enthusiastic volunteers, scientific advisors and generous sponsors, Laskeek Bay Conservation Society was able to continue to collect baseline biological information, providing insight into important conservation questions and educating residents and visitors of Haida Gwaii.

TABLE OF CONTENTS

2. EDUCATIONAL PROGRAM

Laskeek Bay Conservation Society provides a unique opportunity for individuals interested in ecology to participate in seabird research. Volunteers commit a minimum of one week to gathering biological data on East Limestone Island and experience the effort that is required to collect and interpret data on a species of conservation concern. Day visitors also come to the island and along with the volunteers, learn about seabird life history, coastal old-growth ecology and the natural history of many terrestrial and marine species.

2.1 LIMESTONE ISLAND FIELD STATION

Nestled in the eastern cove of a 48 ha island, a small, wood cabin and five tent platforms overlook Hecate Strait, providing a base for our research and education program. Here, staff and volunteers gather to plan the day's field work, transcribe and collate data, design and modify field techniques, cook dinners and share countless hours together, learning about the natural world around and beyond Limestone Island.

2.1.1 Staff

The Society employed three full-time field staff this year who contributed 287 days. Colin French returned to Limestone Island as Camp Supervisor for 13 weeks, making this his eighth field season. Colin also worked under contract for two, pre-season weeks, banding Ancient Murrelet adults and setting up camp. Joanna (Jo) Smith joined Colin for her first field season after volunteering during last year's program. Jo was hired for 11 weeks as the Interpreter /Biologist, and two weeks as the Camp Supervisor. Greg Martin continued as the Society's administrator, working 13 weeks throughout the year on camp support and many more additional weeks organizing Society matters.

2.1.2 Volunteers

Thirty-nine individuals volunteered for field work this year, with three contributing two weeks in March for pre-season banding and camp set-up. An additional four Haida Gwaii residents helped out prior to the season starting, loading or modifying field and camp equipment. Average length of stay was 11 days and eight volunteers stayed for two weeks. Total days contributed by all volunteers was 389, a 25% increase over last year, with seven volunteers returning from previous years.

Our invitation to local and non-scientific persons was met with enthusiasm again this year. Just over half of the volunteers were Haida Gwaii residents and three-quarters were non-scientists. Two -thirds of volunteers were from northern BC and one volunteer traveled from Yellowknife, NWT to enjoy our program. As in previous years, we had several parent-child volunteer pairs and four of the five families were from Haida Gwaii.

2.1.3 School Groups- Project Limestone

High school students from Haida Gwaii traveled to Limestone Island again this year to help with the Ancient Murrelet banding program. Despite the absence of some of the initiating teachers, two schools participated in the "Project Limestone" program.

Students from the Queen Charlotte School kayak club came for two days, marking seven years of participation, and outdoor education students from G.M. Dawson School traveled from Massett for their second year of involvement. In all, twelve students and four adults were involved in Ancient Murrelet activities, resulting in 32 visitor days.

All school visitors participated in a daytime, interpretation program, learning about Ancient Murrelet biology, the diversity of flora and fauna, introduced species and general research methodologies. Later each night, they returned to the island from their campsite on Louise Island and helped to capture and weigh chicks, learning how to record data and take body measurements. All students and teachers were very enthusiastic and despite the lateness of the hour, were keen to learn as much as they could about Ancient Murrelet conservation, natural history and research techniques.

2.1.4 Tour Groups

Commercial tour operators continue to visit Limestone Island during the Ancient Murrelet breeding season. Maple Leaf Adventures, Blue Water Adventures and Duen Sailing Adventures visited the island between May 11 and June 8, bringing 86 visitors on eight guided tours, resulting in 86 visitor days. All groups came ashore during the day, walking around the colony and learning about the natural history of the island and it's inhabitants. Then, when we were ready to start banding chicks at night, the groups would return to shore, excitedly picking up and releasing murrelet chicks in the dark.

Visitors on these sailboats were primarily from Canada and the United States, however, Duen Sailing Adventures brought students from Pearson College, allowing us to enjoy the company of youth from Italy, Spain, Poland, Germany, India and Ireland. Like all visitors, this group enthusiastically learned about Ancient Murrelet ecology and anything else we could teach them until two-thirty in the morning. Finally, Blue Water Adventures brought visitors ashore after all the chicks had left the colony providing an excellent opportunity to learn about the flora and fauna on Limestone Island and discuss broadly the ecology of Haida Gwaii.

2.1.5 Visiting Scientists

We had 16 researchers visit this year. They came from the Canadian Wildlife Service (CWS), Ministry of Environment, Lands and Parks (MoELP), Parks Canada (Department of Canadian Heritage), University of British Columbia (UBC), University of Victoria (UVic) or on contract from the South Moresby Forest Replacement Account (SMFRA).

Tony Gaston (CWS) opened camp on Reef Island again this year, banding adults and chicks for five weeks with the help of Joelle Fournier (Haida Gwaii), Christine Adkins (UBC) and Christine Eberl (CWS). Rob Kelly and Isabel Buttler (LBCS/SMFRA) spent the longest time on the island, staying with us for 12 days while they completed vegetation plots. Tony Gaston led entomology Professor Dr. Richard Ring (UVic) on a tour of Limestone Island to examine the forest structure and consider questions that might be pursued in the future.

After the season officially ended on July 11, we had three scientists and one graduate student visit from the Centre National de la Recherche Scientifique (CEBC Chizé and CEFE Montpellier) and Université of Marseille, France. Lucien Tessier, a dendrochronologist, examined forest age structure on several islands in Laskeek Bay and Patrick Duncan and Gwenaël Vourc'h studied deer behaviour and ecology. Upon returning to Charlotte, Patrick Duncan was joined by Jean-Louis Martin to give a public presentation of the collaborators' ideas of the deer study taking place in Laskeek Bay. Jean-Louis visited Limestone at the end of the season to discuss this year's research with Isabel, Gwenaël, Colin and Chris Bowman.

2.2 EDUCATION INITIATIVES

Each year, some information is collected that serves mostly an educational and natural history function and only a minor monitoring role. Data sets are compiled as lists or notes, bringing together anecdotal or incidental observations. Initiatives like these are used as demonstration resources for visitors and volunteers to increase exposure to features of the island and Haida Gwaii that they encounter during their orientation; the following are some examples.

2.2.1 Insect Collection

One aspect of the island that has not been previously examined is the insect fauna on East Limestone Island. Beginning in April, we started collecting insects as we traveled throughout the island. Staff and volunteers then pinned the specimens using accepted entomological techniques and arranged them in major taxonomic groups. Sixty-four species were gathered, most of them beetles, and the in-the-hand comparisons of the pinned specimens allowed volunteers to successfully distinguish insects that look the same but belong to different groups, e.g. flies that mimic wasps and bees. Over the winter, the insects will be identified at least to Family level and the collection returned to the island next year so that it may be used by more volunteers to explore the diversity of life at ground level. The collection and study of insects will help us learn about their ecological role on the island and possibly enable us to monitor changes in vegetation structure as a result of introduced deer.

2.2.2 Intertidal Transect

On May 7, 1997, we undertook an intertidal transect on the limestone bedrock ramp on the south side of Cabin cove. Mary Morris, a coastal ecologist volunteering for one week, worked with all staff and volunteers to describe the flora and fauna from the low water mark to the forest's edge. Several hours were consumed with identifying and describing the numerous zones along the rock, including vertical and horizontal increment measurements and hunting for crabs amongst the many California Mussels. Back in the cabin, the species lists were finalized and a schematic diagram of the bedrock ramp drawn to tie in the information that we had gathered. These type of transects allow volunteers to learn about another ecosystem type on the island and in this particular case, work with a specialist in this field of ecology.

2.2.3 Songbird Point Counts

Songbird point counts are done along the main trail, using the same protocol each year. Five stations are located at 100 m intervals and ten-minute counts at each station are used to note species occurrence and movement. These counts are primarily used to increase bird song identification skills of staff and volunteers, since birds are usually heard and rarely seen.

This year, we conducted seven counts between May 3 and 28, 1997, and heard 19 different species. Counts were usually done between 1100 and 1500 hrs. and results might reflect diurnal activity patterns. Most of the birds were passerines but several hawk and woodpecker species were seen, as well as the occasional hummingbird.

3. SCIENTIFIC MONITORING

The education and scientific monitoring programs are tightly interwoven, allowing all volunteers to participate in the data collection and preliminary analysis, as well as learning broader ecological concepts. Long-term projects are started after careful consideration of the objectives and methods, allowing data to be collected in the least invasive way possible.

3.1 ANCIENT MURRELET RESEARCH

Ancient Murrelets are provincially BLUE-listed primarily due to threats from introduced predators and oil spills. The Council on the Status of Endangered Wildlife in Canada (COSEWIC) has designated the Ancient Murrelet as VULNERABLE indicating that declining populations may become endangered unless the factors responsible for the decline are addressed. Our long-term monitoring will aid in answering questions related to lifetime reproductive success and adult and chick survival.

3.1.1 Adult Banding

One of the ways to assess adult survivorship and breeding status is to capture adult murrelets when they arrive on the colony in the spring. A large net was used to catch Ancient Murrelets in flight and three net locations were used again this year, Spring Valley, Cabin Cove and North Cove. Our efforts began on March 22 and continued until April 10, at which time we stopped to prevent disturbance during egg-laying. We resumed on May 11 and stopped on June 9 when colony attendance declined rapidly, logging almost 34 hours of net time. Total numbers of murrelets caught over the season was 411 (377 in the net, 13 on the ground and 21 in burrows). However, there were 42 double recaptures of birds banded 1989-1996 and 29 recaptured 1997 birds, so, excluding these recaptures, our total sample of birds was 340 (Table 1).

Table 1. Distribution of 340 Ancient Murrelets caught March 22 - June 9, 1997, East Limestone Island. Breeders were birds caught before April 15 with less than 10mm brood patch, or after May 1 with >19 mm brood patch, or with chicks. Birds of unknown status were caught between April 15 -30, or had a brood patch 10-19mm.

		<April 15	mid-season		After May 1		TOTAL
		Breeder	Unknown	non-Breeder	Unknown	Breeder	
NEW	Net / ground	79	2	92	11	17	209
	Burrow	0	0	0	0	8	
RECAPTURED	Net / ground	63	6	14	4	31	131
	Burrow	0	0	0	0	13	
		135	8	106	15	69	340

Recaptured adults help to give us information on survivorship and breeding status and we recaptured 13 adults that were banded as chicks in 1990-1992 and 1994-1995; no chicks banded in 1993 were trapped this year (Table 2). Among adults banded as chicks, one third of those 2-3 years old and all those five or older were breeding.

Table 2. Ancient Murrelet adults recaptured in 1997 that were banded in previous years as either adults or chicks; numbers in parentheses indicate how many were breeders this year.

Year Banded	No. recaptured 1997	Banded as ADULTS	Banded as CHICKS
1989	7 (6)	7 (6)	none banded
1990	14 (14)	12 (12)	2 (2)
1991	13 (13)	12 (12)	1 (1)
1992	13 (12)	12 (11)	1 (1)
1993	7 (7)	7 (7)	0
1994	14 (8)	7 (5)	7 (3)
1995	9 (5)	7 (5)	2 (0)
1996	54 (51)	54 (51)	0
TOTAL	*131 (116)*	*119 (109)*	*13 (7)*

3.1.2 Chick Banding

A system of clear, plastic funnels was used again to capture murrelet chicks as they made their way to sea. The protocol changed slightly this year to monitor funnels between 2300 and 0230 hrs instead of one hour after last chick was banded (1990-1995) or until 0200 (1996). Funnels were monitored for 36 nights, between May 8 and June 12, and both the start and end of chick departures were determined. The first chick departed on May 11 and peak departure was on May 24, when 41 downy murrelets headed through the funnels. This year, 583 chicks were banded: 527 from funnels, 29 caught outside funnels and 27 found in burrows.

To compare 1997 with other years, the average number (± SD) of chicks banded before 0200 hrs was calculated for years 1990-1996; 87.5% of chicks have been caught before 0200 hrs. The seven-year average was 583 ± 88 chicks compared to 456 chicks banded in 1997. The average of all chicks caught throughout the night in the funnels, regardless of time, was 667± 99, slightly higher than the 527 caught in 1997. However, apart from the steep drop between 1990 and 1991, when we know that raccoon predation on East Limestone Island was heavy, numbers of chicks caught and banded on the colony has remained relatively steady between years.

3.1.3 Burrow Monitoring

Burrow checks were started on April 7 with the placement of knock-down sticks in the entrance of 72 burrows in two plots: Spring Valley and Cabin. This year, occupancy was the same as last year, 38%, but the number of birds that laid eggs in burrows was lower, 21 vs. 28 pairs (Table 3).

Table 3. Occupancy and fledging success of monitored Ancient Murrelet burrows, East Limestone Island.

	1996	1997
Original burrows monitored	89	72
New burrows found	2	16
Useable burrows	74	56
Burrows occupied (% occupancy)	28 (38 %)	21 (38 %)
Burrows with 2 chicks (% fledging success)	22 (79%)	14 (66 %)
Nest abandonment	2	6
Burrows where 1 chick fledged	4	1

Each year we band or record the band of adult murrelets occupying burrows in the two monitored plots. It's exciting to see the same individuals returning to the same burrows year after year (i.e. site fidelity) and more exciting still when an adult returns to a plot where it was banded as a chick (i.e. philopatry). In 1997, we banded 8 new birds, for a total of 21 marked murrelets in burrows. Eight murrelets were found using the same burrow that they used last year and one pair has used the same burrow for four consecutive years. One bird banded in 1992 has occupied the same burrow for the last six years.

In previous years, Ancient Murrelet departure vocalizations have been recorded as adults and chicks leave the burrow. This year, we successfully recorded departing vocalizations at six of the 15 occupied burrows, slightly fewer than last year.

3.1.4 Gathering Ground Counts

During the breeding season, Ancient Murrelets congregate in the water surrounded by Low, Reef and East Limestone Islands, with numbers greatest several hours before sunset. Between March 16 - June 15, a spotting scope was used by staff and 31 volunteers to count murrelets between Low and Limestone Islands, two hours before sunset. The highest single count was 302 on April 26 but there were several peak periods where

>100 birds were counted each night: April 22-29, May 20-26 and June 7-8. On eighteen evenings, fog, storms or a heat shimmer over the water prevented the daily count.

3.2 MARINE SURVEYS

The waters and islands of Laskeek Bay are in a Ministry of Environment Wildlife Management Area. Each year, we survey the waters of Laskeek Bay for mammals and birds along the same transects, particularly focusing on marine birds and pinniped haul-outs. During these surveys, volunteers have the opportunity to view whales, seals, sea lions and seabirds, learning how to distinguish the different species, and note foraging behaviour and seasonal movement patterns.

3.2.1 Seabird Surveys

In 1997, four seabird surveys were conducted between May 13 and June 28 at 10-18 day intervals. In other years, surveys have also been done in April but because of workload considerations and frequent storms, we concentrated our efforts over just two months.

Fifteen bird species were counted this year, including six alcids, two species each of gulls, loons, and ducks and one species of shearwater, grebe and cormorant. Steller's Sea Lions and Harbour Seals were the most common mammals seen during each survey but Minke whales and Harbour Porpoises were seen on half of the surveys.

Marbled Murrelets have been analysed specifically in previous years, primarily because of conservation concerns. In British Columbia this species is Red-listed primarily because of the loss of nesting habitat in old-growth forests. Peak counts were taken on June 18-19 with 183 birds, but this is fewer than have been found in other years (492 - 1996; 275 - 1995; 635 - 1994; and 1686 - 1993).

3.2.2 Marine Mammal Surveys

Marine mammal watches of Laskeek Bay were conducted from a point close to the cabin ("Lookout Point"). Over the course of the season, 25 watches were done with staff and 21 volunteers, resulting in 15 hours of observation. Pinnipeds were seen on 14 of the watches and while cetaceans were infrequent, two Grey Whales, one Minke Whale and a pod of 20 Killer Whales were counted.

Including all observations between March and July, ten species and 1452 individuals were counted. In order of abundance, our list includes Steller's Sea Lions, Harbour Seals, Orcas, Harbour Porpoises, Pacific White-sided Dolphins, Dall's Porpoises, Minke Whales, Grey Whales, Humpback Whales, and Northern Elephant Seals.

There are two sea lion haul-outs in Laskeek Bay, one at the eastern end of the Skedans Islands and one on the offshore rocks of Reef Island. From March through May, as many as 180 Steller's Sea Lion were seen on the Skedans Islands. By late May, sea lions had disappeared from Skedans and more than 300 were found on the eastern rocks of Reef Island. Harbour Seal counts were done during seabird surveys and the greatest count was 115 on Skedans Islands, in mid-June.

Orcas were seen during the day four times and heard once at night during Ancient Murrelet chick banding. Both resident and transient Orcas were seen (including T-70). In all, 36 Orcas were counted, some individuals twice, and photos that were taken from the Zodiac will aid in identifying these individuals.

3.2.3 Black Oystercatcher Census and Banding

Black Oystercatchers continue to nest along the rocky shorelines of many of the islands in Laskeek Bay and this year we surveyed 35 nesting locations. During our initial surveys in May, 16 nests had between 1 and 3 eggs. By late June, seven chicks were present at four nests. Several weeks later, we banded six chicks but time did not permit us to return to the other nests before we closed the station for the season thus the final counts of chicks and eggs are unknown. Predation of nests appeared to be the most obvious reason for nest failure and, if the pair on East Limestone Island is any indication, this shorebird spends a great deal of time defending its territory.

3.2.4 Glaucous-winged Gull Colony Census

Glaucous-winged Gulls have been censused since 1993 in order to provide a gross estimate of population trends. Five islands were censused June 15-23 and 276 nests contained 1-3 eggs. In general, there appears to be a progressive shift from Kingsway Rock to Lost Islands, with more gulls nesting on the Lost Islands (Table 4).

Table 4. Glaucous - winged Gull colony census in Laskeek Bay 1993-97. Cumshewa Island was added in 1994 and totals are given for nest counts without the Cumshewa colony.

Colony	1993	1994	1995	1996	1997
Lost Islands	140	165	145	175	226
Kingsway Rock	79	82	56	46	36
Skedans Islands	20	12	11	1	8
Low Island	4	2	1	6	0
Total	234	261	213	228	270
Cumshewa Island		7	4	2	6

3.3 TERRESTRIAL FAUNA AND FLORA

3.3.1 Red-breasted Sapsucker Nest Surveys

Red-breasted Sapsuckers continue to nest on the island in seemingly high densities. Cavity excavation began in early April, and chicks were first heard calling in late May - early June. Fledgling sapsuckers appeared during the second week of June and many were seen learning to grub with one or both parents. We now have 53 wildlife trees in our sample and trees were photographed and mapped and nest cavities identified for future reference. Two new birds were banded this year and as a result of a determined effort by one of our directors, Seana Burke, we learned that sapsuckers are difficult to capture as they fly into or out of their cavity!

3.3.2 Bird Checklist and Field Notes

Daily checklists were completed throughout the field season, resulting in 63 species tallied for Limestone Island and Laskeek Bay; 32 was the greatest number of species counted on a single day (April 16 and 27).

In years prior, two raptors were known to breed on Limestone Island: Bald Eagles and Peale's Peregrine Falcons. No eagles bred this year but the pair of falcons on the south facing-cliffs successfully reared at least one fledgling in a new location. For the first time, we noted a pair of Sharp-shinned Hawks along the main trail and observed two fledglings with parents feeding in early July.

Shorebirds such as Whimbrels, Wandering Tattlers and Black Turnstones made frequent visits to the islands in the spring, stopping over in the rich feeding locations. Belted Kingfishers were added to our list of known breeders on the island, when a nest was found on the south facing slopes. Fork-tailed Storm Petrels returned to the small colony in the cabin cove, calling late at night in May and early June. Lastly, Cassin's Auklets were heard on several occasions in the evenings of chick banding, but burrows were not monitored this year on Cassin's Tower.

On the afternoon of May 26, songbird banding took place near the cabin, with Tony Gaston and his students from eastern universities. Five birds were caught over the six hours, including a Red-Breasted Sapsucker and four retraps (two Winter Wrens and two Hermit Thrushes).

3.3.3 Introduced Mammal Surveys

Limestone Island is affected by the introduction of three mammals: Sitka Black-tailed Deer, Red Squirrels and Raccoons. Deer browse severely limits most of the understory vegetation below 1.5m. This reduces the abundance of flowering plants and shrubs from the rocky shoreline to the forested interior. This year, an island-wide deer census was not conducted but 10 deer were counted (mostly on the north side) by Gwenaël Vourc'h (Univ. Montpellier, France). Considering the island's small size and its proximity to larger populations of deer, research questions will be restricted to ones of a monitoring nature, for example, the results from the creation of deer exclosures.

Red Squirrels were surveyed again this year to describe distribution or movement throughout the island's diverse habitat types. This is part of a collaborative project to assess the impact on songbird populations now that the shrub layer has been greatly reduced. Ten surveys were done between April 21 and June 9, involving 20 of the volunteers. There were fifty squirrel detections (only nine of them inside the 20m station radius) resulting in 0.9 squirrels per survey. Squirrels were most often detected on the main and look-out trails.

The presence of raccoons on nearby Louise Island continues to threaten the Ancient Murrelet colonies on East and West Limestone Islands. Three spotlight surveys were done during low tide on May 10, May 31 and June 28. Three to four raccoons were

observed each time foraging at Vertical Point, which is an easy swim to the murrelet colony. With the permission of the Ministry of Environment, Lands and Parks, we killed five of the raccoons and collected information from each carcass. To protect the Ancient Murrelet colony from this introduced predator, we must maintain pressure on nearby populations in order to prevent their access to the seabird colonies.

3.3.4 Plant Inventory

A list of plants found on East Limestone Island was begun in 1994 and was compiled from published authorities and field observations. This year, efforts were made to create a comprehensive floral species list and to engage the volunteers in looking for rare or less common species, usually on cliffs which are out of reach of deer. The list is now complete, except for mosses, lichens and grasses, and will be finalised over the winter to include abundance notes and a locality map. This list, if updated at regular intervals, may serve as a way to monitor population changes over time. For example, species may become more or less abundant as a result of grazing from introduced herbivores. Also, a check list can be given to each volunteer to make notes and more easily learn about the native vegetation.

4. CONCLUSION

This year was very successful with respect to many aspects of the Ancient Murrelet monitoring and ecological research, and especially with regard to our efforts to catch adults on the colony and expand the project to examine more species on the island. We also enjoyed the greatest number of participants since the society began eight years ago.

The diversity of biological information collected this year is a reflection of the broad interests of many of the volunteers and staff. We are all teachers on Limestone Island. It is an environment where we can share our understanding of this ecosystem, develop our skills of critical thinking and cultivate our sense of wonder and curiousity. Thank you to each volunteer for joining our program this year, bringing all of your gifts and boundless energy. Please come back and share in our project next year.

5. ACKNOWLEDGEMENTS

Established in 1990, the Laskeek Bay Conservation Society is a grass-roots, non-profit organisation of volunteers, based in Haida Gwaii, BC. We are committed to increasing public awareness and understanding of the marine and terrestrial environments, especially on the offshore island of East Limestone Island. With the generous contributions from the following supporters, we were able to continue our long-term scientific monitoring and education program:

- W. Alton Jones Foundation for financial assistance to our education and interpretive program and administration costs;
- Canadian Wildlife Service National Research Centre, Ottawa and Pacific and Yukon Region, Delta, B.C., for financial assistance and long-term equipment loans;

- Ministry of Environment, Lands and Parks, Skeena Region, for permission to conduct research in Laskeek Bay Wildlife Management Area and undertake conservation measures to protect the breeding Ancient Murrelets;
- South Moresby Forest Replacement Account (SMFRA) for financial assistance to our core program;
- Gwaii Trust for assistance with Project Limestone, our program for Haida Gwaii students.

We also thank the following individuals for their generous assistance and/or donations, all of which made a difference to the quality of the information collected and our camp life:

- Tony Gaston (CWS) for scientific advice, enthusiasm and endless good humour;
- Greg Wiggins (SMFRA) for helping us to secure funding for our core operations;
- Marvin Boyd, Dan Pick and Mark Batten of South Moresby Air Charters, for friendly and safe transportation of volunteers and for tolerating large volumes of gear each week;
- Todd Golumbia and Parks Canada for a fuel donation and for his collaborative scientific efforts;
- Crew, and guests of the 'Maple Leaf' and 'Island Roamer' for welcoming us aboard to enjoy gourmet dinners and for their wonderful company;
- Nathalie Macfarlane, Haida Gwaii Museum, for storage of a roomful of gear in her basement, public relations on our behalf, and for providing a venue for a public talk regarding deer ecology and research in Laskeek Bay;
- Graeme Ellis for black and white film and camera for orca photos;
- Chris Bowman for countless hours of help to computerize the 1997 finances;
- Greg Martin for his assistance above and beyond the call of duty;
- Conrad Collinson, skipper of 'Haida Warrior', Rob Wener, Al MacLeod and Dan Tober for loading gear at the beginning of the season and Rob Pettigrew, skipper of 'Tomram', for helping to load gear at the end of the season;
- Joelle Fournier for her cheerful and efficient assistance in the office at the end of the season;
- the Volunteer Directors for their continual commitment and support, without which we would be unable to have such a program;
- all those who volunteered their time in town to collect groceries and run errands, particularly Catherine Allen; and
- all of the volunteers who participated in the Limestone Island camp, purchased t-shirts or made donations, thank-you and please join us again next year.

For further information, please contact us at:
Laskeek Bay Conservation Society,
Box 867, Queen Charlotte, BC V0T 1S0 Canada
Ph/fax: (250) 559-2345
laskeek@island.net