Volunteer Feral Goat Project on Jedediah Is.

RE: DNA Sampling taken by Kent & Joni Wyles for Dr. Luikart of Grenoble, France.
Project needs & expenses paid for by Parks B.C.
Work done on site by Kent & Joni Wyles, & Jeff & Athena Wyles.
Please note these observations, comments, & suggestions are strictly those of Kent & Joni Wyles.

Parks B.C. supplied & paid for all the supplies we requested and also delivered & helped load the vessel "Grizzly Bear" (G.B.) in Nanaimo. Jeff & Athena Wyles volunteered their time, over two weeks during the holidays, helping to get the goat project underway. What follows is a time line summary of the events which took place.

Dec. 21/2001 Arrived at Jedediah Is. with a deck load of supplies for the "Goat Project". Lumber, wire fencing, re-bar posts, and feed supplies were off loaded from "G.B.", taken by skiff to Long Bay and off loaded on shore. The supplies were then hauled up and stored in Rogers house. Rogers house became our storage & workshop area for the duration of the project. We subsequently transported these same supplies & feed to our corral site in Boom Bay as needed. We all pitched in to erect an approximate 1 acre corral complete with covered feed station. Grain was kept in an open feed trough while the alfalfa hay was suspended in a net well above the reach of the sheep. The goats' natural ability to browse while standing on their hind feet allowed only them to feed on the alfalfa hay. This initial corral was altered various times over the following months as animal patterns were observed. The animals became comfortable with each new set up and feed was consistently kept available during these corral changes.

NOTE: Due to a tremendous windstorm in mid December the goats normal wandering & feeding patterns had changed dramatically with almost all trails & roadways having been blocked with whole trees and littered with windblown tops, branches etc. This natural blow down provided a "windfall" of leaves, buds & berry feed for the animals so initial interest at the feed station minimal.

Parks personal came out to Jedediah Is. over the Christmas holidays to assess this wind damage and see our corral. As the public trails and roadways needed to be cleared and opened up, Parks suggested we put in a bid to do the cleanup work. Other bids were taken as well. Our bid was accepted and we started the trail cleanup work Jan.13/2002. Soon after clearing the Deep Bay to Boom Bay roadway, activity at the feeding station & corral, which was erected along this roadway, increased.

On Jan 21st. Bill Turko (B.C.Parks) arrived with Jeff Derksen (head constable for S.P.C.A.) to inspect the corral & approve our proposed sampling procedure. Our plans met with both their approvals.

We consistently kept feed available for the animals throughout the rest of January and February while we completed the trail work. This feeding pattern worked well until "Will" (the horse) became a constant problem! "Will" would not enter the corral by way of the North or South gateways, but rather by charging straight through the 4' high stucco wire fencing. Thus he would devastate 25' to 30' sections of the wire, bending re-bar posts to right angles and making for many frustrating repairs. Every method of scare tactic we employed to discourage "Will" only seemed to encourage him all the more. About a week before we finished the trail work, I began catering to "Will". It was our only hope. I brought him a ½ gal. of grain and 2 sheaves of Alfalfa to the barn every afternoon just before dark. This paid off and we had no further problems with him. (Is this what you call "Horse sense"... a method in his madness?)

On February 18, 2002 we finished trail work and could now devote our time to finishing off the necessary wooden corral & test chute. The remaining corral & chute panels I put together in "Rogers house" & then put them in place at the corral site when done. No objections from the goats, in fact, they watched with curiosity as I pounded posts one afternoon from the North entrance. We now kept a very close vigilance on the comings & goings at the "Goat Corral" to determine their feeding pattern & the optimum time for their capture. Note: Due to the time of year this corralling took place, only billies were occupying the N.W. part of the island. The Nannies during their winter gestation & kidding period always stay to the South side of the island. Early morning and early afternoon a group of 12-19 animals (all billies) would show up to feed. The odd time a few sheep & a few goats would be in the area together during the midday. We wanted an early morning catch, without any sheep present, as they are much to flighty. We almost did our capture with 19 animals one early frosty morning, but when about to close the Deep Bay side gate, I realized we best not. The confined area was still too big & we didn't need all that excess room that would allow animals to maneuver around us. We calmly let them all go and promptly down sized the area to a better working size that just the two of us (Joni & I) could handle. The attached sketch should explain this. The goats accepted this change readily & the narrowness of the final corral seemed to be of no concern to them. It was now a go for sure and we were ready.

Feb. 25th. dawned a frosty, clear day and shortly before 10 A.M. the goats arrived....on the run for breakfast! It was quite a sight from our frosty vantage point at the end of Boom bay. We too, were on the run to close the gate pronto! Once we closed the main entrance on the West end (Deep Bay side), we slowly walked towards the milling and feeding billies. None of them were excited or too concerned until I picked up the end of our sweeper fence when we were about 100' from them. This sweeper fence enabled Joni & I to keep squeezing, or crowding if you like, the goats into our all-wooden corral section. Once inside this area they realized their capture & started to panic somewhat. Immediately however, they started filing into the narrow holding chute and once they were all in, we closed the gate. They were still pushing & trying to get ahead of each other, piling up, so to speak, and one billy actually climbed up on his comrades' backs and jumped to freedom. Our one "escapee". We quickly realized that tying each billy goat off to the side of the chute would solve our (and their) problem. At no time were we harsh of voice or quick in motion and calmness was thus maintained.

As we had laid out possible needed items ahead of time, i.e.: extra boards, wire, rope etc., we soon had each goat tied off to the chute side panels and within minutes calmness prevailed over all the animals. To begin with we blindfolded each animal, but it was soon apparent that this wasn't necessary. The goats for the most part took their turn to be examined & sampled in good stride. The odd sissy, such as is in any crowd, protested with a bellow or two but all in all they were very calm. Our procedure was to take a photo from the rear first, then to take measurements of the horn width, followed by an approximate height at the withers. Next, hair samples (approx. 50) were taken from the upper tail & lower back area as this area consistently produced the most root follicles. Each hair sample was pulled with clean needle nose pliers & never touched by our hands. They were placed into an envelope and numbered accordingly with data written on the outside. Lastly the tissue sample was taken from the ear with a hand activated leather punch. The ear was washed with Detol solution before & after a ¼" disc was cut from the left ear tip. The sample was immediately immersed in a small vial of 99% alcohol supplied by Dr. Luikart. All instruments were washed in a heavy Detol solution before & after each sampling, & disposable gloves were worn & disposed of after each sampling as well so as not to contaminate other samples. There was very little bleeding from the ear sampling and stress we feel was kept to a minimum. The ears were also examined inside & out for ticks and a quick overall visible & "hands on" health check was made before each goats release.

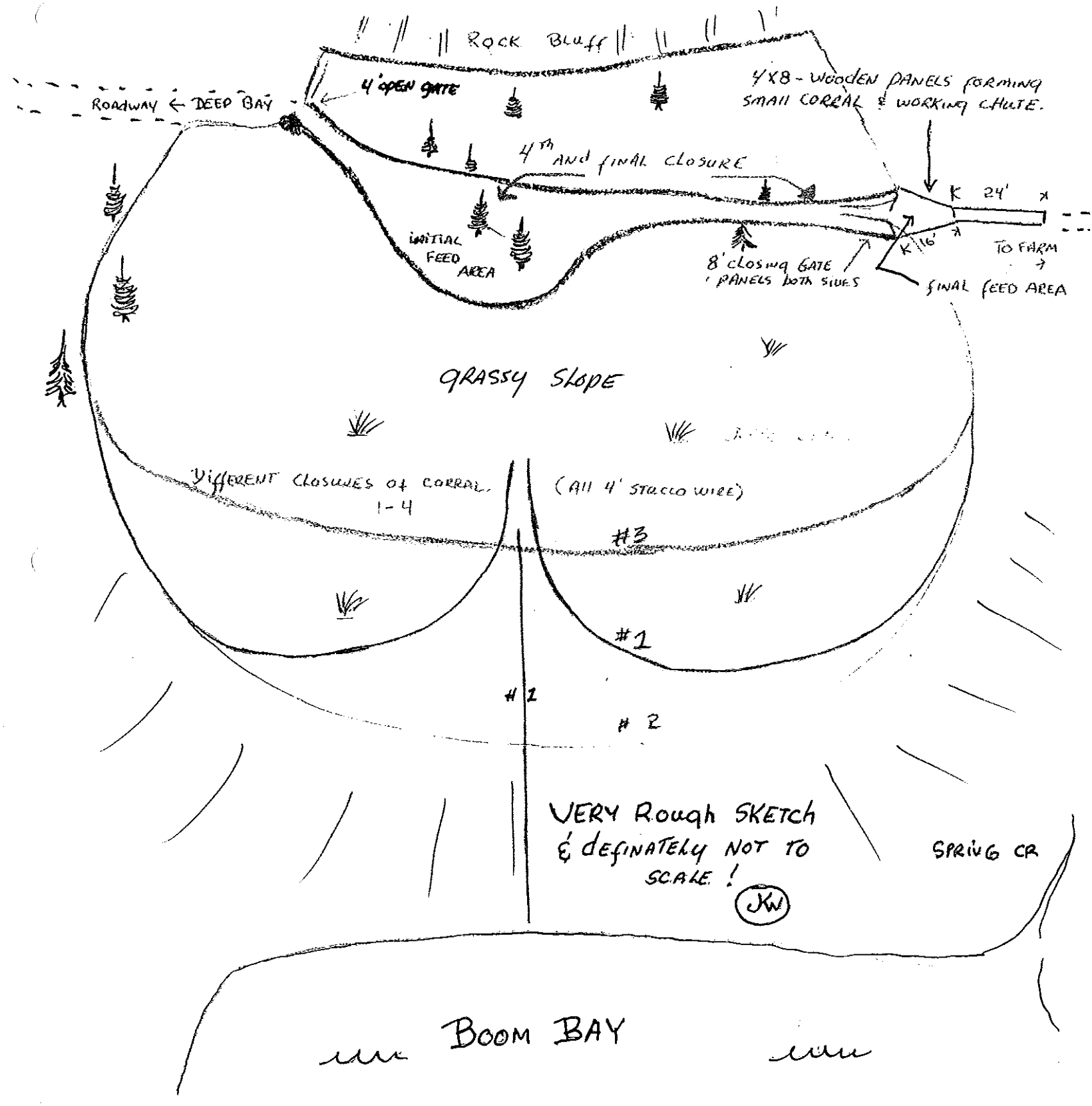
The overall confinement and sampling took a little over 3 hours to complete. This included the corralling time as well. Within this 3 hour time frame, Bill Turko (B.C.Parks) arrived and there was a good ½ hour spent with show & tell. Bill was tickled to see our success and offered to come back the following day to help take the whole corral down & remove all the articles to Rogers house in Long Bay. This he did & brought Peggy (B.C.Parks) along as well. Their help was very much appreciated & aside from getting the roof over the feed area taken down & the wooden panels unscrewed, we were able to accomplished the cleanup. At a later date I took the feed area roof section down & unscrewed all the panels that were stored inside Rogers house. Aside from final paper work, photo's to be developed etc. the project came to completion. Joni & I are happy with the results of our efforts on Jedediah. We have yet to collect goat DNA samples from the farm in Cowichan Bay. Once this is done we will send all the samples to Dr. Luikart in Grenoble France for analysis.

We look forward to Dr. Luikart's results, and hope it confirms the mystique surrounding the feral goats of Jedediah Is.. They are believed to be of Spanish origin, brought to the island during the early Spanish exploration days. If this is true, it will confirm that these goats have historic value and should remain a part of B.C.'s history, where they are, as the feral goats of Jedediah Is. which is now a marine park for all to enjoy.

Project completed April 15th, 2002

For further information contact Kent & Joni Wyles by mail at:
439 Murray St. Nanaimo, BC. Canada V9R 1B6
Phone 1250-714-4737 or by email: lmk@shaw.ca

Signatures: J. Kent Wyles Joan M. Wyles Date: 16/04/02


ROCK BLUFF
ROADWAY ← DEEP BAY
4' OPEN GATE
4X8 - WOODEN PANELS FORMING SMALL CORRAL & WORKING CHUTE.
4TH AND FINAL CLOSURE
K 24'
K 16'
TO FARM →
INITIAL FEED AREA
8' CLOSING GATE / PANELS BOTH SIDES
FINAL FEED AREA
GRASSY SLOPE
DIFFERENT CLOSURES OF CORRAL 1-4
(ALL 4' STUCCO WIRE)
#3
#1
#1
#2
VERY Rough SKETCH & definately NOT TO SCALE !
JW
SPRING CR
BOOM BAY

SAMPLE DATA

The following information (#1-16) relates to the 16 DNA tissue & hair samples that were taken from the feral goats on Jedediah Is. B.C. Canada. Position 49.30.166 N.Lat. 124.12.769 W.Lon..
Samples were taken for Dr. Gordon Luikart by Kent & Joni Wyles. For further info email: lmk@shaw.ca

Sample #	Date	Sex	Age	Color	Wither Height	Horn width	Apparent condition
1	February 13, 2002	Male	unknown	Black body, rusty legs & trim	27"	22", flat outward curve	Healthy but thin
2	February 24,2002	Male	unknown	Black body, buff & rust trim	27"	19", flat outward curve, tips turned up	poor shape, horn bruises, skinny bare shins, weak & picked on.
3	February 25,2002	Male	unknown	Black body, buff legs & trim	28"	22", flat outward curve	Healthy, good shape but not fat
4	February 25,2002	Male	unknown	Black body, rust trim	26"	16.5", flat outward shape	Healthy, good shape but not fat
5	February 25,2002	Male	unknown	Brindle body, black & grey streaks	26"	22", flat outward & upward curve	Healthy but thin
6	February 25,2002	Male	unknown	Buff brindle body, black & grey guard hair	28"	26" wide, 18" long ea. Up & outward curve	Healthy, in good shape, beautiful coat, 6-8" long guard hair
7	February 25,2002	Male	unknown	Black body, buff & rust legs	26"	17", outward curve	Healthy but thin
8	February 25,2002	Male	unknown	Black body, buff legs, ears edged light	27"	21" outward curve	Healthy but thin
9	February 25,2002	Male	unknown	Dark brindle, buff with more black	28.5"	18" upward curve	Healthy & very good shape, not thin
10	February 25,2002	Male	unknown	Brindle with black strap down back	26"	22.5" flat outward curve	Healthy & in good shape
11	February 25,2002	Male	unknown	Black body, rust trim, legs etc.	27"	23" flat outward curve	Healthy & in good shape
12	February 25,2002	Male	unknown	Rusty brindle ,black strap down back	27"	18" up & outward curve	Appears healthy but thin
13	February 25,2002	Male	unknown	Black & buff rust	28"	23.5"	Healthy fair shape
14	February 25,2002	Male	unknown	Black & rust	26.5"	20.5" flat up & outward sprial	Healthy fair shape
15	February 25,2002	Male	unknown	Black & rust legs & trim	28"	23.5" flat outward curve, wide flat section	Healthy, good shape but not fat
16	February 25,2002	Male	unknown	Black, buff belly, legs et.	27"	25" flat outward curve.	Healthy but thin

The following 4 samples are of "San Clemente" goats taken from stock owned by Lyle & Fiona Young of Cowichan bay Farms, 1560 Cowichan bay rd. Cowichan Bay, B.C. V0R 1N0 Ph.1-250-746-7884
Email: farmer@cowichanbayfarm.com for further genetic information. www.cowichanbayfarm.com

Sample #	Date	Sex	Age	Color	Wither Height	Horn width	Apparent condition
17"Cocoa"	April 15,2002	Female	14 months	Black cape, red/brown	21"	3"wide,3"long	Healthy, thin, nursing one kid
18"Amity"	April 15,2002	Female	unkown	Black cape, fawn	23"	5.25" wide, 9" long	Healthy, thin, nursing twins
19"Pablo"	April 15,2002	Male	unkown	Black body, some buff-rust trim	26"	20" wide	Healthy, long lush coat & long gotte
20"Joey"	April 15,2002	Male	unkown	Black Cape, reddy brown rump	26"	14.5" wide	Healthy, long lush coat & long gotte

OBSERVATIONS

Volunteer Feral Goat Project on Jedediah Is.

Observations were primarily compiled during the fall, winter, & early spring months over the past 2 years, and some observations from previous years as well. Please note these observations, comments, & suggestions are strictly those of Kent & Joni Wyles.

Observations

#1. Feral goat population appears to have remained relatively stable over the past 2 years. An estimate of the total population remains 50+ animals as of spring 2002.The ratio of male to female appears to be fairly equal. However, none of the largest billies that were observed last winter and spring have been seen at all this winter.

#2. Most male goats, over two years old, hang out North of the farm while most of the nannies, with or without kids, stay south of the farm & Rogers house. Nannies are very difficult to assess because of their seclusive nature, especially when kidding or with kids under a few months old. They also prefer to inhabit the southern area of Jedediah Island, specifically the East & West benches of Mt. Gibraltar, because of the difficulty of access for others. Later in the spring, the nannies & their kids tend to move from their southern retreat to other areas of Jedediah Is. as the kids mature.

#3. Early winter & before kidding starts appears to be the best time for observing the females. Male goats, for the most part, are easier to approach and therefore study at anytime. However, during the Christmas holidays this year, we were able to round up & move a mixed group of 28 billies & nannies due to the rut still being on. We were able to lightly drive this group from below Rogers meadow all the way to Boom Bay via the ridge that divides Long Bay & the west farm meadow. My son & I accomplished this using a steady walking pressure from behind either side of the group, 75' apart, using low voice communication back & forth. The goats were not disturbed by this and were easy to observe. Calm patience & perseverance pays off when observing either sex as they eventually accept a reasonable amount of your presence for picture taking & observation at close range (up to 25').

#4. During late fall, as the rut begins, the billies have great head bashing and bellowing contests. At times this will go on late into the night creating some hideous sounds.

#5. First newborn goat kid was observed Jan.17/2002 and the first newborn lamb was one week later on Jan.24/2002.

#6. Feral sheep are widespread throughout Jedediah. Is. with population estimates at 60+ mature animals (excluding this years lambs). The rams, like the billies, tend to bunch together with some preferring the Deep Bay area and others preferring the West End of the farm meadow. There are two obvious groups of ewes, with one group preferring the farm orchard meadow area, and the other group preferring Rogers meadow area. These areas of preference are especially visible once lambing begins in January. The ewes tend to lamb in the timber fringes of the orchard & meadows while the nannies kid mostly below Mt. Gibraltar in Little Bull Pass area.

#7. By the end of winter the meadows are well grazed off and the ewes move out in search of more feed on the open rocky benches as nursing demands a higher intake of food. At about 2 months old, the lambs are beginning to graze as well and this increases the pressure on grasses and other graze-able food. The ewe's & lambs occasionally commingle with the goat nannies & their kids who are also searching for the most nutritious feed. However, as grazers, the sheep leave little behind and generally completely graze an area off before moving on. They definitely browse other food sources as well having been observed completely cleaning up fallen cedar boughs and some other debris & plants. The current population of both animals puts a high demand on the graze-able plants & grasses available before spring has arrived. However, the goats tend to be a more nomadic browser and do not stay in any one area for too long. They nibble a bit of this and that, browsing on leaves & fallen boughs, grasses, plants & lichens as they move along. The goats never stay in one area and completely clean out a food source unless perhaps in the severest of winter conditions when hunkered down & hampered by snow.

#8. The lamb survival rate appears to be high this spring (2002), with many twins observed. More black lambs have also been spotted this season than in the past.

#9. Coast black tailed deer have been observed on Jedediah Is. as well. Most frequently they are seen on the Sabine Channel side & the Deep Bay area. In the fall we've seen deer in the orchard as well, enjoying the wind fallen apples. Deer, being excellent swimmers, come & go frequently amongst the adjacent islands. Raccoons have been observed as well as river otters & mink along the shoreline & tidal areas of the island. The otters, interestingly enough, use the main roadway to cross the island on a regular basis. Ironically squirrels are scarce on the island. Bird life varies with the seasons. During the winter months the pileated woodpeckers are a unique attraction. In spring the Canadian geese arrive & squabble for the best nesting sites around the island. There is a complete variety of smaller bird & mammal life normal to the gulf islands at this time of year, but we won't go into details.

#10. Plant life on Jedediah Island appears in all aspects to have adapted to the browsing & grazing patterns of the feral inhabitants. Young seedlings, especially the firs, are plentiful wherever the canopy allows them enough sunlight to grow. These seedlings are most evident along the roadways and various trails due to the openness to sunlight & the disturbed soil. The sheep love to eat cedar & thus young cedars are not as plentiful by any means. The only heavy debarking we've noticed has been on wind fallen maples and this is primarily done by goats. We have noticed that wildflowers, for example Monkey flowers & Blue-eyed Mary's, have adapted with a unique low growing profile that has allowed them to survive the intense grazing of the feral animals. Obviously these wild flowers still bloom profusely when in season. The rock plants, succulents, lichens, and various mosses have continued to survive on the rocky benches as well. From our observations, the variety of flora on Jedediah Is. differs very little when compared to that of other gulf islands. How Jedediah Is. flora does differ is in the way it has had to adapt to the grazing of the feral animals. This makes Jedediah unique unto itself, because of these feral animals.

#11. The Goats general heath & condition, observed during our DNA sampling, is comparable to that of the goats sampled at the Cowichan Bay farm and in some ways the feral goats appear better. For example their coats are much glossier & combed out in appearance. This is likely due to their living in a natural wild environment rather than in confinement. The coat of guard hair, especially on the males, gives them a stocky & fat appearance when in fact they are typical trim goats underneath. On the goats sampled, no tick activity was observed.

#12. The preferred feed during the volunteer goat project was 1st Alfalfa cubes, 2nd Alfalfa hay, and 3rd Cob grain. The molasses & mineral blocks attracted less interest.

SUMMARY & SUGGESTIONS

Please note these comments & suggestions are strictly those of Kent & Joni Wyles.

Our summary & suggestions are based on our 43 years of rural experiences together, having been ranchers, loggers, hunters, a trapper and fire warden, and for the past 17 years fisheries guardians on the Pacific North West Coast. Our lifestyle has given us the opportunity to observe natural & unnatural influences and how they affect a variety of ecosystems in many different ways and locations.

Having spent a great deal of time at Jedediah Is. over the years, and in particular during these past 2 years, we feel that Jedediah Is. benefits by both the long time feral goats and the more recent feral sheep. The browsing & grazing patterns of these animals throughout the island have made it the unique marine park it is today. Jedediah is an open island, easy to hike by all user groups and ages. The feral animals naturally keep the wild grasses & shrubbery at bay along the trails & high public use areas. This reduces fire & hiking hazards, and the need for steady park maintenance.

However, left unattended & free to multiply, the feral animals will eventually cause severe damage to the uniqueness of the island from overgrazing & over-browsing. Also, left unchecked, their population would become increasingly unhealthy. It is in our opinion that the goat & sheep population could be culled to approximately 20 sheep & 30 goats. This would be a sustainable population small enough that the Island could support. If the population were kept at this reduced size, we believe the farm meadows could sustain the sheep year round, thus keeping them in the meadow areas where they are beneficial as grazers. The sheep would also likely stay off of the rocky benches where wildflowers etc. are more prevalent. It is beneficial that the sheep & goats both remain on the island, albeit in smaller numbers, because without their constant grazing, the meadows & trails would become over grown and by late summer the dry grasses would become a severe fire hazard threatening the entire island. Both species would benefit with a healthier population while maintaining a sustainable diversity of life unique to Jedediah Island.

It is a well know fact that previous to Jedediah Is. becoming a marine park, the feral goat & sheep population was held somewhat in check by various locals, fishermen etc. filling their larder. Keeping these animals in check now that Jedediah is a park will require other methods ie: yearly culling, limited entry hunts (which could provide funds for island projects), selective removal for special interest farms or scientific research using proven corralling/feed method etc.

In our eyes, the idealism of removing the feral animals so Jedediah Is. will become a prime example of a coastal Douglas Fir ecosystem in it's natural state is unrealistic. The true Douglas fir ecosystem is the moist West Coast of Vancouver Island. Jedediah Is. lies in the middle of Georgia Strait, one of the driest areas of the BC coast. The fact that cactus grows on Jedediah & adjacent islands, in abundance, proves this.

Project completed April 15th, 2002

For further information contact Kent & Joni Wyles by mail at:
439 Murray St. Nanaimo, BC. Canada V9R 1B6
Phone 1250-714-4737 or by email: lmk@shaw.ca

Signatures: J. Kent Wyles Joan Wyles Date: 16/04/02