

Chapter IX

Buccaneer Cove

At one time in the birth and growth of the Galapagos Islands, Isabela was two islands: the southern mass of Sierra Negra and Cerro Azul were one; the northern chain of volcanoes from Alcedo to Cape Berkeley composed the other. During the course of eruptions lava flowed into the strait ^{dividing} ~~between~~ them narrowing the passage and filling it in, until by the coalescence of the flows a land bridge of jumbled frozen rock sealed the gap. This low waist named Perry Isthmus, which has existed since long before historical times, is steadily being widened by occasional outpourings from either side until it is now six miles across. The east side of Perry Isthmus combines with the land masses to north and south to form the boundaries of Cartago Bay, where no sandy coves have yet developed on the constantly changing shoreline, a labyrinth of channels and inlets between fingerlike flows of coal-black lava. Nor does Cartago Bay offer good anchorage for a small boat. The flukes of an anchor can become so tightly ~~inexticably~~ wedged in the jagged lava bottom that they cannot be broken loose from on deck and the anchor is lost.

On all but the most recent flows mangrove has spread a green canopy on stilted stems that ^{makes} ~~forms~~ a barrier to hide completely the back country from a person in a small boat. Gaunt, charred and whitened trunks of mangrove stand where recent flows have burned through this belt of vegetation. But the denudation is short lived: everywhere among the tangled dead branches, and along the water's edge of the fresh lava, seedlings with twin terminal, apple-green leaves are popping up. It does not take

long to heal the gaps in the mangrove barrier.

The inlets are a favorite haunt of the green sea turtle who finds in them an abundant forage of marine algae. They also harbor the white-tipped shark whose faint outlines and swift minatory movements through the green, opalescent water warn us not to dangle our hands over the side of the boat.

Behind the mangrove wall an undulating ^{flow} ~~PLAIN~~ of pahoihoi lava stretches inland towards the steep slopes of Sierra "Egra. On this barren surface, sheltered from ~~the~~ sea breezes, the sun's absorbed energy is transformed into trembling heat waves that rise from the rock as from the top of a hot iron stove. Nothing but a few hardy clumps of brachycereus grow on this baked and dehydrated ~~flow~~ plain. A mile or two from the shore the lava flow was split by a ~~hill~~ mound of older ash and cinders/~~flow~~ heaped up during a more ancient volcanic event. The lava flowed around the base of this hill on both sides, leaving a down-stream "shadow" of unflooded ground ~~before~~ between the hill and the ~~rejoined~~ reunited halves of the flow. On this island in a sea of lava, saved by geological accident, animal and plant life survived. The vegetation in the unflooded area is chiefly bursera, croton bushes, and giant opuntia cacti; and living in burrows in the yellow-brown ashy soil are large numbers of brightly pigmented land iguanas Conolophus pallidus. These lizards are colored in different shades of yellow, brown, and orange, the distribution varying somewhat with the ~~from~~ individual. In some the head and shoulders are a pale, almost canary yellow, blending into white on the throat with a shading through orange to dark brown on the hind quarters and tail. Others ^{are} ~~have~~ much darker, but retain the pale yellow on their spiny crests.

These Isabela iguanas are quite distinct from the Plaza

Ialand race which averages darker in drab shades of gray and raw umber. They are even more brilliantly pigmented than the Santa Cruz iguanas of "Dragon Hill". As with variations in coloring in so many animal~~s~~ species the pigmentation of Conolophus may be related to dietary factors.

The members of this colony were also distinctly less shy than those of the colonies on Plaza and Santa Cruz islands. ~~If approached slowly,~~ By avoiding quick motions it was possible to ^{of them} approach ~~them~~ to within a few feet. But they were ever alert and watchful, and though manifesting little fear, they followed ^{you made} every movement/with their eyes ~~only~~, until at last to keep you in sight they were forced to turn their heads. From time to time an iguana would lick ~~it~~ its lips with a thick, red tongue like a person under nervous strain, and when finally the tension became too great, the creature, reacting as though a tightly coiled spring had suddenly been released, dashed away to its burrow or to relative safety beneath a rock or ~~or~~ fallen branch.

This place where they live out their confined and seemingly monotonous lives at the foot of the cinder hill is a parklike grove of mixed Palo Santo and cactus. the trees are rather widely spaced, leaving grassy swales and patches of bare ^eochrous ground between them. Scattered around among the tufts and bunches of dry, yellow, lifeless grass is the usual forest litter of dead branches and brown fallen leaves, which give the park land a very autumnal, unkempt appearance. Around the edges of the grove where the lava long ago had spread in and was being encroached upon by younger trees, a rough mosaic-like pavement in an ancient fishscale design of scalloped wrinkled lobes replaced the ashy soil. The fall character of the scene was enhanced by the dried leaves gathered in the cracks in the lava, and by the yellowing

foliage still clinging to the branches above, which contributed a curious out-of-time contradiction to the May season. One has the feeling of changeless endurance here, that Melville, with the undetached aversion of a New Englander, described as _____ . No doubt after the garua or following the winter rains, if or when they occur, the trees put out new leaves and the grass becomes green, introducing a fleeting mood of spring, but for most of the year a sere and withered condition prevails, the atmosphere of a perpetual autumn, when in Melville's words rain never falls.

Across the Cannal de Isabela on the island of Santiago a bay, as different from Cartago as their common volcanic origin could conceivably produce, has been fashioned by a longer period of submission to the forces of the sea. James Bay, named by English sea captains more than a century ago, is a wide cove along whose shore a mile of steep, brown beach absorbs the attenuated waves of the strait, which mold its profile into a billowing sequence of bulges and hollows. Hundreds of ghost crabs have dug their holes here into which they retreat at high tide, but emerge when the sea has withdrawn to scratch their living from the packed sand. They leave a complicated tracing of parallel scars and dark pellets ~~to~~ as an evanescent record of a furtive arcane mode of life. They are ~~a~~ wary crustaceans with retractable periscope eyes which they keep trained always on an approaching person and cannot be surprised by stealth. I ~~tried~~ attempted time and again to creep up on them, but they always stopped feeding when I was still a dozen yards away, and after examining me with what I began to feel was more akin to an expression of hostility than to one of spacial calculation, they would scamper for their holes. But perhaps the distance between us had been

reduced to a certain crustacean estimate of minimum safety. In any case from the security of their doorways they continued to watch until ^{I crossed} another invisible boundary, when they would pop out of ^{the} sight. To test ~~my~~ theory that motion was more alarming to the crabs than the presence of a strange object, I sat myself down beside a hole so that I could ^{comfortably} ~~observe/it~~ keep it under constant observation without moving. I waited a long time while other crabs tiptoed or dashed across my field of vision, some indeed came so close that I could study their methods of feeding. I began to suspect that my crab had another exit from his home, and was about to give up when I noticed two stalked eyes with pink tips just showing over the sand rim in the shadow of the hole. How long he had been watching me I had no way of knowing - perhaps from the beginning of my vigil. Apparently reassured by my hour-long motionlessness he tentatively crept out leg by leg and began to feed. The process is to scrape up alternat~~ively~~ely with the two front legs claw-fulls of sand which are transfered to the crab's mouth and there sorted over by the mandables to remove edible material such as small crustaceans, plankton, etc. The cleaned sand is then dropped in ~~sand~~ small round pellets as the animal moves forward.

During the course of these observations I noticed ~~that~~ what might be interpreted as a kind of social intercourse or code of manners among ghost crabs. Inevitably, while feeding at random a crab will find himself near the entrance of another crab's burrow. He sidles up to the hole and furtively reaches over the edge with one or two claws, tapping the sides gently, whereupon the occupant if home will come to the entrance. There is no apparent conflict; it is like knocking at a neighbor's door to say good morning. The visitor then moves away of his own accord. In emergency situations crabs will take refuge in the nearest

available burrow, and so as might be expected more than one crab may on occasion occupy a single hole. When this happens it seems to cause no noticable disturbance to any of the occupants. This sharing of a house can be interpreted as the right of asylum among ~~these~~ ghost crabs. But perhaps it goes deeper than that, to a lack in their communities of a strong property sense or terretorial instinct, which so many animals besides humans are reputed to have , and share their dwellings indiscriminately on an emergency basis, or simply because the arrangement is convenient. So perhaps they have ascended to thet happy state - or have never descended from it - of complete individuality combined with utter disregard for personal possessions, a truly oriental accomplishment.

as so many animals, besides humans, are reputed to do, and share their dwellings indiscriminately on ^{an emergency} ~~a~~ basis of ~~need~~ emergency or ^{because it is a} simple convenience. They have ascended to that happy state of complete individuality combined with utter disregard for personal possessions, a truly oriental accomplishment.

Behind the beach, which is topped with a thick growth of manzanillo and water hake, a salt tolerant mangrove-like tree, a ~~shallow~~ ^{the} land-locked/salt lagoon is ~~a~~ favorite haunt of a flock of flamingoes that feeds but does not nest there. ^{this} ~~These~~ ^{basin is} shallow waters ~~are~~ also inhabited by a group of Galapagos ducks, an endemic variety of teal, which are almost always seen swimming together in the green algae-rich water. ~~Other~~ ^{kinds of} Several/shore birds also frequent the lagoon on a more temporary basis, yellow legs and stilts in winter. ^A Beyond the south end of the beach and lagoon the land stretches level for another mile to the edge of a wide unvegetated lava flow of relatively recent origin that ends in a vertical cliff at the shore. This level area, besides scattered guayavillo and byrsara trees, supports a scrubby growth of bushes and annual plants, and is a favorite pasture (covered with the same kind of trees) for wild goats. A low hill a quarter of a mile inland ^{is} rises directly from the low land. We called this Goat Hill because it was here ^{where} ~~that~~, on several of our cruises, we hunted ~~and shot~~ goats for meat. Goats ~~are~~ ⁱⁿ exotics ~~on~~ the Galapagos Islands, ~~that~~ ^(since) are damaging the endemic plants and upsetting the ecological balance. ^{a few of} Their elimination from a scientific point of view would be a desirable, killing them for food, for food can serve only a useful purpose, and cannot be objected to, but rather ^{is} encouraged by conservationists. Quite a different ~~situation~~ attitude prevails now in regard to the native animals and birds, and so it is with shock and ^{regret} ~~dismay~~ that one reads in the accounts of the expeditions early in this century of how their members shot flamingoes, ^{for food,} in preference to other non-endemic animals,

words
 because, in the estimate of the scientists themselves, they were such
 delicious delicacies
 good eating ~~as much more delicious.~~ Today scientists are able to rationalize
 their depredations in terms of a search for truth rather than a
 satisfaction of physical appetite. ⁴ Goats by the way should not be
 disparaged as ^aculinary delicacy. When prepared, ~~as ours were,~~ in
 a pressure cooker no meat ^{could} be more juicy, tender, and tasty
 than the goats we lived on, and we ate them without compunction,
 which was not the case with the occasional sea turtle that supplied
 our commissary.

North along the shore of Santiago about two miles is
 another cove Celeta Buccaneer, Buccaneer Cove. The name is not
 fanciful; Pirates did land there with their booty, not as far as
 is known with treasure, but once with a captured cargo of English
 preserve. Until quite recently the earthenware jars in which the
 marmalade was stored were still to be found on the shore above
 the beach. They are all gone now, carried away by souvenir
 hunters or for more practical purposes, but one can still find a few
 fragments of unglazed pottery on the sloping cinder littoral above
 the beach. The beach at Buccaneer Cove is very different from
 deeper and narrower more closed in
 the James Bay beach. Though the cove is deeper and the beach much
 shorter
 narrower it is less well protected from the sea waves that pound
 in continuously on against the steep narrow beach. The surf here
 is continuous even when off shore waves are scarcely perceptible,
 for ~~physico~~
 a phenomenon which the geography of the shore is responsible. The
 sides of the cove act like a funnel to compress the waves into a
 and e
 smaller space/concentrating their energy, into a which can only
 then
 appear only in greater amplitude. The south shore of the cove
 is an eroded stratified cliff of volcanic tuffs and pumice which
 rises sheer from the water for more than ^{two}~~one~~ hundred feet. Boobies

and other sea birds roost on its ledges, which are splashed white with their guano, and shearwaters may nest in season in its crevices. Sealions elbow themselves out onto the lowest ^{shelf} ledge above the tide, to sleep away the heat of the day, ^{where} and dozens of ^{orange} orange Sally Lightfoot crabs speckle the rocks ~~with~~. This cliff is the undercut side of ~~an ancillary~~ ^{an ancillary} cone ~~ancillary~~ ⁱⁿ to the major volcanic complex of the island of Santiago. From ~~the~~ top of the cliff the cone slopes back steeply ^{to} the summit ~~at~~ a thousand feet where the bowl of the old crater is concealed. The sides of this small volcano are almost bare except for a scattering Palo Santa trees.

The north side of Buccaneer Cove is equally precipitous though otherwise entirely different. It is formed by a fingerlike headland ^{is the} peninsula of brick-red consolidated ash, which probably long ago was the remnant of another cone that came into being long ago and has all but been washed away by the sea. Only half as high as the opposite ~~cliff~~ ^{cliff}, the fires of the earth have been at work on ~~baptized it~~ ^{aged it} before the sea did its work, it was exposed by the sea. burned earth had been at work on it. ~~It looks like the lining of an~~ ^{It looks like the lining of an} ~~earth~~ ^{burned} furnace heated ~~out~~ ^{How it was} ~~which had been fired too hot, all its minerals oxidized~~ ^{inside} and vitrified, its crumbling ~~walls~~ ^{oxidized walls}, all purple and red with ^{by their content of} oxidized ~~metals~~ ^{minerals} metals, supply the elements for a growth of giant cacti that the tufts of the facing cliff could not provide. Great chunks of this refractory material, loosened by the working of waves, have fallen into the cove where they stand ^{in temporary} as isolated ~~islands~~ ^{as} as the ^{Point} sea grinds away at their foundations. A tall pinnacle of precariously balanced blocks of harder rock has been left standing free, for the time being reprieved for the time being from ~~the~~ ^{by} immolation destined for all the ~~to~~ ^{ejected} more patient forces of the sea for which all the matter extruded in these islands from the ~~face~~ ^{rock of earth's hot} ~~interior of the earth~~ ^{from} is ultimately destined.

The north side of Buccaneer Cove is equally precipitous though otherwise entirely different. It is formed by a narrow, fingerlike peninsula of brick-red consolidated ashly material, the remnant of another cone produced long ago during the early volcanic evolution of the island, and has all but been washed away. Only half as high as the opposite cliff, the fires of the earth aged and cooked it before the sea attacked it. We see here the inside of a burned out furnace, whose crumbling walls, colored all purple and red by their content of oxidized metals, supply the elements for ~~the~~^a growth of giant cacti which the tufts of the facing cliff could not ~~supply~~ provide. Great chunks of this refractory material, loosened by ~~the working of waves~~ wave action, have fallen into the cove where they ~~stand~~ rest in temporary isolation as the Pacific grinds away at their foundations. A tall pinnacle of precariously balanced blocks of harder rock has been left standing free, ^{from immolation} reprieved for the time being by the more patient forces of the sea for which all matter ejected in these islands from the earth's interior is ultimately destined.

Except for the cactus, the vegetation is sparse; a few white trunked trees cling to the dark face of the wall to accent like bird lime the most stable ledges. But the cacti have pre-empted all the prominent sites where they stand like sentinals guarding their crumbling fortress. At the very tip of the peninsula they are crowded on the last fallen blocks, ~~where~~ as though in expectant watchfulness they prepare ~~x~~ a final stand against the ^s assaults of nature to which paradoxically they too belong.

The beach at Buccaneer Cove, owing to its steepness and to a constant surf, is a difficult place to land from a small boat, but from a sailing ship's longboat, such as used by pirates, it could probably be done without much danger of swamping. Now'a-days,

those who wish to go ashore use the smaller beach on the north side of the narrow peninsula where the waves break with less force. The sand on this beach has a pinkish cast, a color which is derived no doubt from the material of the peninsula. The Buccaneer Cove beach is brown; its sands ~~are~~ originate in a different source and contain a considerable admixture of olivine. Behind the beach the land rises at first abruptly and then more gently ~~in an~~ as ~~inclined~~ a slope of stratified volcanic deposits now densely cemented on the surface into a hard layer which extends for ~~a considerable~~ a considerable distance into the interior. ~~From these strata come~~ ^{the} ~~the supply of olivine~~ are the source of olivine. These strata supply the olivine. An overhang of moderate height at one end of the beach permits a view almost directly down onto the waves that break across the sand. They come in from several directions deflected by the cliffs on the sides of the cove to make a criss-cross pattern of foam as they shoot up the beach lose energy and slide back. The endless churning of the waves that flatten and disperse in thin sheets streaked with bubbles, stirs the sand, dislodging the life beneath the surface which then is vulnerable to predators.

As I stood on the low promontory watching the glint and sheen from the evening sun on the beach below, a small flock of oyster catchers came swooping down to alight in front of an advancing wave. Nimble they ran just ahead of the water, and when it fell back followed down probing the sand with their ~~blunt~~ long, blunt, coralline bills for the creatures left exposed. Never hesitating, never getting caught by the sudden rush of a wave, they danced back and forth ~~with the swirling water~~ in perfect harmony with the swirling water and with perfect assurance. They play ^{ed} this game with the sea scarcely wetting their feet, always maintaining between them and the waves' margin the narrowest possible space, and

if their calculation ^{was} ~~is~~ in error and they ^{were} ~~are~~ surprised by ^a sudden cross flow, they lightly ^{took} ~~take~~ to wing, coming down again in a flash of black and white plumage at the tip ~~of~~ of a tongue of foam. Back they ^{ran} ~~run~~ when it retreated ^{had} ~~pecking~~ here and there in the sand for the food the wave ^{had} ~~uncovered~~ or left stranded.

The making of a living at the edge of the sea is the result of long genetic trial. ~~For~~ ^{for} ages the ancestors of these birds have been learning the art of foraging in the rhythmic swing of the waves. Their living desendants follow the patterns bestowed on them, unconscious of their heratage, obeying an instinct that has not let them down. It ~~cannot~~ be claimed that they know as individuals a livelihood is ~~a~~ ^{available} from the rush of the sea; they know in a more enduring sense with a knowledge embedded in their nervous systems by generations of experience that a quickness of foot and an alertness of eye, when applied to the boarderline~~s~~ which separates land from sea, to that rich zone between the tides, will keep hunger and starvation away. here we see a phenomenon not of our day alone, but with roots that have transmitted its meaning across the ages to connect with theirs our own misty origins.

Under the overhanging~~ing~~ from which I watched the oyster catchers, the sea has carved out a long gallery where sealions retreat ~~from~~ to sleep and nurse their pups. At low tide one afternoon after bathing ^I saw a lava lizard, Tropidurus, stalk a yellow butterfly on the sunny shelf of rock outside the ~~sealion's~~ cave. He had come down to the beach ~~for the flies~~ ^{by} attracted ~~by~~ the flies (that swarmed around the) /sealions. Catlike he crept up on his victim while the butterfly stood in the sun unnoticed, ~~slowly~~ opening and closing its wings. With a sudden lunge the lizard had it squarely by the body, head

first in his mouth. The butterfly's wings gave a few convulsive twitches and then were still. The slow process of swallowing then ~~began~~ began. Releasing his grip slightly tropidurus gulped at his prey and with each spasm it entered farther into his mouth until the body was hidden and only the yellow wings projected from either side of his jaws. As the gulping continued the wings were folded forward like ^{the} closing of a fan ~~and~~ until finally they too disappeared. For a few minutes before dashing off the reptile stood quietly, eyes closed, with the slightly goiterous, dispeptic ~~a~~ look of one who regreted his meal.

Later that same afternoon on the cintery slope above the beach we discovered a small Dromicus, the only native snake in the Galapagos, that had just caught a tropidurus nearly half as big as himself. The snake had the lizard by the neck and was working to shift his hold to the lizard's head while the latter was struggling to get free. In spite of the not great discrepancy in size the contest was unequal. The snake's grip with his fine sharp teeth could not be broken, and when inevitably tropidurus's head entered the elastic throat of dromicus his struggles ceased. From then on for dromicus the process of getting ^{his} ~~a~~ meal was simply one of swallowing, at which snakes are all adept. Their jaws unhinge to permit the passage of objects much larger than their throats could normally accommodate, and the skin of their necks stretches enormously until the spaces between the scales becomes many times the area occupied by the scales themselves. By means of a peristaltic pumping action in which most of the snake's body musculature was engaged, the now dead lizard was gradually engulfed. Its legs presented a momentary obstacle to dromicus's mouth which was overcome as they were folded back into a compact package in much the same way the butterfly's wings had been folded

by the lizard's contemporary a few hours before.

The food chain in the much simplified biotic inter-relationships of the Galapagos ~~WZ~~ Islands is shorter than it would be on the mainland. Here, in its larval stage a butterfly is a vegetarian drawing its energy requirements from the photo-synthetically stored radiation of the sun, the foundation on which all life rests. Once removed from this ultimate source the herbivorous insect becomes food for a lizard which in its turn nourishes a small snake, another reptile. ^{Does} ~~Did~~ the food chain end here? It may, if the snake dies and its substance enters the soil by way of bacterial decay. But a small fraction of its chemicals both organic and inorganic will reappear in the structure of plants at the beginning of the chain to start their progress up the ladder of life once again. On the average only one molecule in ten advances from each rung to the next ^{higher} ~~high~~ rung of the ladder, ^{are} ~~so~~ inefficient ~~as~~ the processes of ingestion; all the rest fall back to the lowest level in a constant rain of sloughed off matter. The ladder, however, is not symbolic of ^a ~~the~~ progress of organized forms that change in shape and shrink in size to one tenth with each step upward; it is a fanciful construction of the ascent of the abstract principle of life through all the discontinuous stages in the chain of life from a vast seething shapeless mass resting on an inorganic basement at the bottom, from which the green over-spreading plants reach up to the sun, to a speck of highly organized, complex forms at the top. The organisms on each rung retain unchanging their positions, handing up ~~only~~ to the stage above only a tiny portion of their living essence.

But if little dromicus does not die of natural causes, he will continue the chain one step higher. As a snake, he might be eaten by a mockingbird, or later in his life, if he

escapes this fate, become prey to a Galapagos hawk. The one we found at Buccaneer Cove may have been fed to the hawklet in the nest in the Palo Santo tree on the hillside above the cove. But here in the Galapagos¹ the food chain finally ends, for the hawks have no endemic enemies, and before the coming of men they had ~~no~~^{no} enemies at all.

The hawk's nest was discovered by one of our expedition and we all visited it the following day. It was a bulky structure of sticks built in a Palo Santa tree half way to the top of the volcanic cone that formed the south side of Buccaneer Cove. As we climbed the cindery slope towards the nest the birds became increasingly restive. Ordinarily, when far from their nests, Galapagos hawks pay little attention to people and can be approached quite closely. Under these circumstances they seem to display merely cautious curiosity. But when guarding their young they change from gentle, unsuspicious birds to fierce and fearless defenders of their aerie, and so it was with this pair. When we reached the nest site we were greeted with piercing cries from two adult birds circling overhead. From time to time one or the other would plunge down at us with such apparent intent to do us harm that we dared not take our eyes from them while we were in the open and were forced to take refuge under the branches of a large tree. By striking with their powerful talons these aggressive birds could ~~cause serious lacerations~~ seriously lacerate the unprotected head and face of the unwary person. As a simple expedient for protecting ourselves against such injury, we held sticks above our heads to deter the hawks from making actual contact, although they continued to dive with alarming persistence. Often an attempted strike is unannounced by any warning cry, and the first intimation of it is the sudden sound of rushing wings as the bird

veers off only inches away. It is a terrifying sight to see a large fierce bird come straight for you ~~at dive bomber speed~~ out of the sky at dive bomber speed. The extended talons are frightening enough, but the steady piercing eyes and the huge, down-curved beak between the partly folded wings declare the undeviating determination of the attack, a readiness even to accept immolation.

When a lull in the dive bombing permitted, we turned our attention to the nest and found there to our surprise a third hawk, presumably ^a the female, in the full dark plumage of ^{an} the adult, crouched down in a hollow in the sticks. On further investigation, at some hazard, it was discovered that she was brooding a few day old, single, ~~downy~~ white downy hawklet. This information was not simple to obtain in the face of her aggressively defensive posture. I undertook the task by climbing the tree, whereupon she rose in the nest and moved over to the side towards me, and as I reached her level she spread her wings in a threatening manner and lunged at me with open beak. She could have attacked with claws too, ~~but~~ except that in her solicitude for her offspring she was more concerned to interpose herself between it and me. Every move I made to see what she was guarding was met by a counter move on her part to ward off my advances. I dared not reach over towards her with my hand for fear of receiving a painful and bloody wound. In the end I obtained a view of the young bird by gently raising her body a few ~~inch~~ inches with a stick, a treatment she resented less than my presence.

Here was an unusual situation: three adult hawks defending a single nest. I had never seen this to occur before with birds of prey, who usually, I had been led to believe, were ^{very} jealous of their terretorial rights. Among passerine birds, foster parents and group care of young is not altogether unknown. I have seen it happen with jays and nuthatches and with warbler

families in which an odd bird has helped to feed the young of a mated pair both at the nest and after fledging.

If other hawks were as fearless as the Galapagos hawks are, they would not survive long in contact with men. Anything as "unnatural" as the cautious curiosity of these birds would certainly be rewarded with lethal measures. Most men do their best to foster and to maintain a barrier of fear between themselves and all other animals, which is mutual only in the sense that fear enters the picture on both sides. The animal's is a conditioned fear for self preservation; the human's fear is ^asuperstitious defensive fear of the unknown.