

## An appreciation of oystercatchers

Olin Sewall Pettingill, Jr.



Magellanic Oystercatcher. Photo/O. S. Pettingill, Jr.



Blackish Oystercatcher. Photo/O. S. Pettingill, Jr.

OYSTERCATCHERS are big, robust, boldly marked shorebirds that inhabit long stretches of the world's oceanic coasts. They are black and white or black all over. Their bills are twice the length of their heads, and red. Upon such powerful and wonderfully designed bills do the lives of oystercatchers depend.

Viewed from above the oystercatcher bill is sharply tipped, but viewed from the side, the bill tip is squared off; thus the bill is like an oysterknife, suited to opening bivalve mollusks—oysters, mussels, and clams—or like a wedge, for prying limpets off rocky surfaces. Since the mandibles are of equal length, meeting firmly at their tips, the bill can pick up food from any flat surface. Furthermore, the bill, long as it is and relatively inflexible, can probe deeply into sand or soft soil for worms and insects. Quite apart from its capabilities for securing a wide variety of food, the bill is also a formidable weapon for discouraging potential predators by painful jabs.

Oystercatchers are so distinct from other shorebirds that ornithologists have placed them in a family by themselves; and because they are so much alike throughout their worldwide range, ornithologists have grouped them in the single genus *Haematopus*. Within their range, however, oystercatchers differ regionally in coloration and habitat selection in such a way that ornithologists have been confounded as to how many species there are.

Without reviewing here the lines of scientific reasoning and conflicting opinions, I will state categorically that the consensus among most American and British ornithologists is that there are six species. Three are conspicuously black and white: the American Oystercatcher (*Haematopus palliatus*, southeastern and southwestern North America, the Caribbean, and northern South America); the Eurasian Oystercatcher (*H. ostralegus*, Eurasia including Iceland, southern Africa, Australia, and New Zealand); and the

Magellanic Oystercatcher (*H. leucopus*, southern South America and the Falkland Islands). The other three are black or brownish black: the Black Oystercatcher (*H. bachmani*, western North America and the Aleutian Islands); the Sooty Oystercatcher (*H. fuliginosus*, Australia and New Zealand); and the Blackish Oystercatcher (*H. ater*, southern South America and the Falkland Islands). In all the species the sexes look alike.

Along the Atlantic coast of North America as well as in Iceland and New Zealand I have watched oystercatchers occasionally, but never for any length of time. So often they were shy and flew farther away whenever I attempted to get near them. It was only in the Falkland Islands that I really became acquainted with oystercatchers.

This archipelago in the South Atlantic, 300 miles northeast of the southern tip of South America, has two oystercatcher species, the Magellanic and the Blackish.

Both species also inhabit the coasts of southern South America. For six months in the late spring and summer of 1953-1954 and again for five months in the same austral seasons of 1971-1972, my wife Eleanor and I were in the Falklands for bird study and photography. During the latter stay we were accompanied by Maurice A. E. Rumboll, my assistant. Inevitably we gave both species considerable attention, as they were equally common, and, because they were insular, non-migratory birds more or less isolated in an area with a sparse human population and not subject to predation by land mammals, they were much less shy—hence more approachable—than any oystercatchers I had observed elsewhere.

The Magellanic Oystercatchers were mostly residents of the extensive sandy beaches along the two big islands, East Falkland and West Falkland, and some of the larger outlying islands. The Blackish Oystercatchers, on the other hand, resided along the many rocky shores throughout the archipelago. Thus, in an ecological sense, the two species were separated, each occupying its own niche.

Although both species were equally common, I first thought that the Magellanic was more numerous, chiefly because at the outset we spent more time on beaches where it was conspicuous by virtue of its black and white plumage and orange-red bill. But later, as we explored the shores of rocky headlands and many of the smaller islands with shores largely of rock, I soon realized that the Blackish Oystercatcher was probably as numerous. My early misconception was due to the bird's uniformly brownish black plumage, which blended so effectively with the grayish black rock strata, ledges, and boulders that a bird could be easily overlooked unless it moved or unless by chance I caught sight of its scarlet bill and stout, pinkish white ("untanned") legs.

Magellanic Oystercatchers sought a wide variety of foods. On the beaches at ebbing tide they probed for sandworms and picked up stranded jellyfish. If there were exposed rocky reefs, they foraged for mussels and limpets. Farther up on the beaches, beyond the normal tides, they flipped over pebbles and small heaps of washed-up kelp and seaweed to uncover and catch whatever insects and crustaceans there might be underneath. Sometimes they moved inland from the beaches to low, grassy wet areas near streams, where they probed, presumably for earthworms.

Unlike the Magellanic Oystercatchers, the Blackish fed almost entirely on mollusks that they found in abundance on rocks and ledges between high and low tides. Occasionally they flew beyond sight of their home shores to mussel beds, also frequented by Magellanics. When both species were present at the same time—not uncommonly—I never saw any evidence of hostility, but rather total disregard of one another.

Both the Magellanic and Blackish oystercatchers were noisy. The most common call of the Magellanic was a piping *kleee-eeee*, loud and piercing with a rising inflection, uttered when flying or standing. The call had great carrying power; we could hear it despite wind and surf. Among a variety of other calls was a prolonged, plaintive *kee-kee-kee-kee* often given in flight, sometimes butterfly-like. Many times our attention was drawn to a flock of several birds by hearing them as they passed far out from shore. The most common vocalization of the Blackish, given when flying or standing, was a piping *quee-ee*, clear and ascending but shorter and less piercing than the Magellanic's. An additional vocalization that I never heard from the Magellanic was a series of loud, ringing, musical sounds, ascending in a rapid, trill-like *purrrrrrr*, followed by high-pitched *queee* notes, then by slower and descending *weee* notes that gradually faded from hearing. The sequence was roughly: *purrrrrrr queee, queee, queee, queee,*

*queee, weee, weee, wee, we.* When two or more birds together gave the series, the result was a remarkable medley. Each bird, when uttering the series in flight, alternated moments of flapping its wings more slowly, butterfly-like with moments of setting its wings and gliding.

My appreciation of each of the two Falkland oystercatchers was attained in separate stages.

#### MAGELLANIC OYSTERCATCHERS

**M**Y FIRST opportunity to watch these strikingly handsome shorebirds for any length of time was on December 18, 1953, at Carcass Island. Here, only a short distance away on a beach, two foraging Magellanics were suddenly joined by two others flying in from afar. At once all four began piping loudly as they drew closer together. What followed defies coherent description. They quick-stepped forward one beside another and occasionally bobbed plover-like; they stopped and faced one another, then turned away, sometimes completely around to face one another again. All this they did with shoulders humped, necks arched, heads occasionally jerked up but bills always pointed straight down, primaries slightly lowered, and tails lifted straight up, unfanned, yet clearly showing the white basal portions. The entire performance, accompanied throughout by piping calls that were variously sharp, high-pitched, and discordant, was over in a minute or so. The visiting pair moved away, then



Blackish Oystercatcher opening mussel still attached to rock. Photo/O. S. Pettingill, Jr.

returned, and all four repeated the complex display. Again the pair moved away, again the pair returned, and so on for six separate performances that were essentially the same. Not once did one bird chase another or show the least inclination to attack. After the last performance, the visiting pair simply took off in the direction from whence they had come.

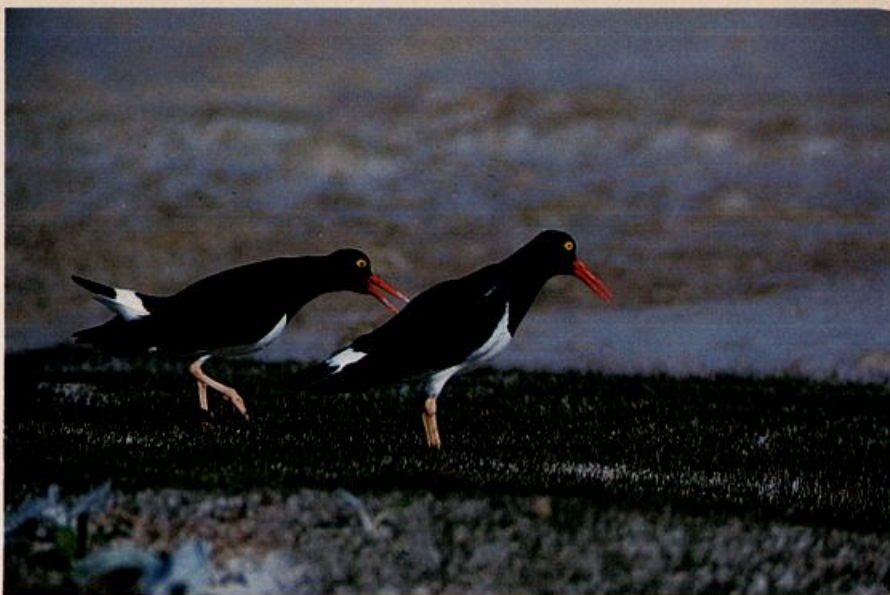
I realized that I had witnessed the "piping ceremony" that European ornithologists have frequently observed in their native Eurasian Oystercatcher and have described in their publications while advancing their ideas of its function. I had never seen any such performance in our American Oystercatcher.

Again later in January, I watched Magellanic piping, this time when they were in small groups on a beach at New Island. Piping in each case was triggered as more Magellanic joined them. Both the arrivals and the birds already present piped loudly with bills down and tails up; there was little moving or turning about. In a minute or so the performance was over. The newcomers stayed, apparently accepted in the group.

After we returned to the Falklands in 1971, Eleanor found our first Magellanic nest on December 3. High up on Volunteer Beach, it was a mere scrape in the sand with one egg between hummocks of old kelp roots washed up from the sea. The occupant pair, greatly disturbed, took to the air and circled her in a slow, butterfly-like flight, piping loudly and rapidly.

On December 7, Alan Miller drove Eleanor in his Land-Rover the full length of Paloma Beach, passing the territories of 15 pairs of protesting Magellanic in the course of two and a half miles. Presumably their nests, like the one at Volunteer Beach, were far up on the beach. While Miller and Eleanor took the drive, I stayed with the first pair they had encountered. Both birds walked up to within 20 feet of me and proceeded to posture repeatedly, bills down, tails up, and piping. When I stopped and stood motionless, they ceased posturing and piping; instead they walked calmly around me in wide circles, meanwhile touching the sand with their bill tips as though picking up food—an example of what ethologists would call displacement feeding. After a short while they became accustomed to my motionless presence and did nothing but stand and watch me.

At New Island from January 3 through January 18 I had an ideal opportunity for



*Magellanic Oystercatchers performing piping ceremony. Photo/O. S. Pettingill, Jr.*

a close acquaintance with Magellanic. Within easy walking distance of the little farm settlement were two nests about 50 feet apart on a grassy flat ("sheep pasture") roughly 100-150 feet from a sandy beach. Both nests, without lining, were in shallow, grassy depressions in the middle of mounds high enough to give the birds sitting on them a wide view in all directions. One nest contained two eggs that hatched on January 5 and 6, respectively; the other held one egg that hatched on January 15.

When I approached the two nests on January 3, the birds on them, seeing me coming, stepped off and walked slowly toward me. As I drew nearer, the birds stepped aside and began piping, bringing up from the beach two more oystercatchers, probably their mates. Then, seeming to ignore me, all four came together facing one another and joined in a series of piping ceremonies such as I had seen years before at Carcass Island. When I moved up to one of the nests and bent over to examine it, two of the birds instantly broke away from the ceremonies and hurried toward me within a few feet, veered around me in a slouching gait, shoulders humped, bills directed down, and tails up. Now and then they stopped and crouched (displacement incubating) while lifting and lowering their unfanned tails. All this was accompanied by a low, somewhat muffled purring, but there was no piping. Their behavior suggested injury-feigning. While I stayed near the nest, injury-feigning was soon replaced by other behaviors—pecking

the ground (displacement feeding), dabbing at the feathers (displacement preening), and then standing at intervals with bills slipped under the shoulder feathers but eyes kept open—"sham sleeping," noted in the Eurasian Oystercatcher and so called by K. Williamson (1953). As soon as I withdrew from the nesting area, the same birds (or so I assumed) that had been on the nests when I arrived promptly returned to the nests, and the other two left for the beach before I was out of sight.

The reactions of the birds to my visits in the next two days were similar. The sitting birds started walking toward me and began to pipe, bringing their partners up from the beach, whereupon a piping ceremony involving all four ensued. On one occasion a fifth bird flew in from somewhere and joined the ceremony briefly.

By January 6, one of the chicks from the nest with two eggs was high up on the beach in the care of both parents. Whatever happened to the other chick, I never knew. At my approach the chick crouched motionless under a leafy plant while the parents showed their concern with piping and displacement behaviors.

From a distance, when the tide was low, I watched the parents foraging for sandworms. Their technique was not a matter of random probing in the sand, but was rather to locate the "breathing holes" of the sandworms and then poke into them, sometimes with success, sometimes not. If a parent was successful, it carried its quarry to the chick, which ac-



Magellanic Oystercatcher chick freezing. Photo/O. S. Pettingill, Jr.

cepted it with gusto unless already well fed.

Both parents were alert to other bird species, especially ones their size or larger, that came close to their beach area. They drove away Black-crowned Night-Herons (*Nycticorax nycticorax*) that stopped to stalk food at the water's edge and noisily pursued Kelp Gulls (*Larus dominicanus*) and Great Skuas (*Catharacta skua*) passing overhead or just offshore. One parent actually flew up under a passing skua and delivered a jab effective enough to make the big bird flinch and change course.

#### BLACKISH OYSTERCATCHERS

KIDNEY ISLAND, its 80 acres mainly covered with tussock grass, was rimmed, except for a small beach, by ledges that provided nesting habitat for several pairs of Blackish Oystercatchers. Thanks to a hut high on the island, my wife and I were able to stay there for three different periods in 1953-1954 and Maurice Rumboll and I for two periods in 1971-1972. Thus we lived close to the oystercatchers around the clock.

However obscure Blackish Oystercatchers may be in their environment, they made up for it with vocalizations, especially when flying. Not only during the day but at night, whether it was calm or moonlit, windy or stormy, we could hear them from our hut as they passed below us over the water. So frequently and under such varying weather condi-

tions did we hear them that I soon believed Blackish Oystercatchers to be as active at night as during the day.

On November 4, 1953, at the beginning of our first period on Kidney Island, my wife and I found a nest with two eggs on pebbles in a wide crevice in the top of a broad ledge well above the tide. The eggs looked fresh but they were cold. The pair to which they belonged were 20 feet from us. They piped a few times, moved about casually, or simply stood and looked at us. Obviously they had not gotten down to the business of incubating their eggs.

The ledge with the nest sloped down and into the sea and was encrusted between the tidelines with mussels and limpets upon which the pair fed commonly. We watched them foraging. They chose to feed on the mussels that were still under water with their two shells not entirely closed. Each bird's technique was to insert the bill between the shells, opening them wider after severing the muscles that held the shells together, then removing and swallowing the soft contents. In some instances, rather than performing the whole operation while the mussel was still attached to the ledge, the bird inserted the bill between the shells and, gripping the contents within, tore the mussel loose and carried it out of the water. When feeding on limpets, whose single, tent-shaped shells were firmly clamped on the ledge by a muscle that resembled a suction cup, the pair usually chose the time when the limpets were above water.

In order to cut out and devour the fleshy parts, each bird first pried the limpets off by wedging the bill between the ledge and the shells, then lifting them off and turning them over.

For sundry reasons we were distracted from further observations on the nesting pair at Oystercatcher Rock (our name for the site) until our third period on Kidney Island in late February. One chick had survived; it was practically full grown, in juvenal plumage with a yellowish pink, nearly full-length bill. Nevertheless it was still dependent on its parents, which continued diligent in obtaining a sufficient supply of mollusks from the mussel bed below. Once we thought that the parents would be unable to reach the mussel bed when, for four days in succession, Kidney Island was battered by winds that attained gale force, keeping the sea well above the normal high tide line and the mussel bed inundated. But that did not discourage the parents. Out to the bed they went, first wading, finally swimming. Once over the bed they plunged deeply, just about disappearing; and up they came with mussels, which they carried back to the ledge before extracting the contents.

When I returned to Kidney Island with Maurice Rumboll for the two periods, I vowed not to be distracted from watching the Blackish Oystercatchers as my wife and I had been in 1953-1954.

Before Maurice and I had left for the first period in November, Stuart Booth, a longtime resident in the Falklands' capital and an accomplished bird watcher, told us about his annual visits to Kidney Island during the breeding season and of how he always found a pair of Blackish Oystercatchers nesting high up on a particular ledge. From his description, the ledge had to be "our" Oystercatcher Rock of 1953-1954.

Sure enough, it was! On November 12, Maurice and I found the nest. There was one egg in virtually the same spot as the one we had visited 18 years before. A pair of oystercatchers was in attendance; they were near the nest and began *queeeping* in protest as we approached. The egg was cold. While I examined it, one of the pair walked up to within three feet of me. The other bird, a little farther away, tucked its bill under its shoulder feathers—sham sleeping with eyes wide open.

The nest, I must mention, was so high up on Oystercatcher Rock and down in a crevice as to prevent the sitting bird from viewing the shore from which we ap-

proached. But never did we catch the bird unaware of our coming, for its mate was always, it seemed, on a nearby vantage, ready to give warning.

Such was the case on November 15 when I climbed Oystercatcher Rock. I was "piped aboard" by the oystercatcher on watch, and this instantly brought its mate up from the nesting crevice. Both birds first walked toward me, then turned aside. There were now two eggs and they were warm. Maurice had reported only one egg the day before. Incubation was obviously under way and with it a change in the pair's behavior. One crouched three feet from me, drooped its primaries, then moved away in a slouch, while its partner strode back and forth farther away, now and then poking its bill into ledge cracks.

Returning to Kidney Island on February 12, we fully expected a family with full grown young on Oystercatcher Rock. To our astonishment there were two adults with two downy young not older than 10 days! The first set of eggs must have been destroyed and the chicks present had come from a second laying. This was true, as we later learned from a Falklander, John Smith, who had visited the island on January 9 and remembered seeing two eggs on Oystercatcher Rock.

We kept the family under surveillance during the next seven days. They were always on the Rock. Without fail, the parents walked from their chicks in our direction, protested with *quee-eeeps*, then with purring as they turned away with head and bill down and wings drooped just a few feet ahead of us. The two chicks had already flattened themselves and "frozen," presumably when their parents had first voiced alarm. One was in a little crevice, the other under an overhanging ledge. If I stood motionless or sat down and remained still, both parents resorted to standing on one foot and sham sleeping—as though to wait me out.

For a period of several hours on three different days I watched and filmed the family, careful to keep far enough away so that they would pay no attention to me. While one parent stayed near the chicks, the other often sought mussels. Tearing one loose, the bird bore it up to the ledge, pushed it into a crack for holding, and proceeded to remove the contents. The chicks, seeing this happening, drew close, and watched with anticipation, ready to take the food directly from the parent's bill. Feedings of this sort had obviously occurred many times in this



Pair of Blackish Oystercatchers piping. Photo/O. S. Pettingill, Jr.

small area, for it was strewn with empty mollusk shells. Sometimes when one parent foraged, the chick sought warmth under the other parent. If the weather was warm and sunny, the chicks wandered over the ledge, exploring cracks, pecking at empty shells, and occasionally picking up an insect, but they rarely followed a parent down the ledge to the water. Foraging for them would be futile since their bills were not well enough developed.

Now and then the two parents piped before each other, usually after one of them had been out of sight of the other for quite a while and then returned. A more elaborate and animated piping performance—indeed a classic piping ceremony—resulted when three adult Blackish Oystercatchers from some distant area alighted on the Rock near the parents. Instantly all five began piping. All the time they postured, bills pointed straight down as they raised and lowered their heads and humped their shoulders. Their tails were not lifted nor were their primaries drooped. Mainly they stood facing one another, moving around very little. The ceremony lasted no more than two or three minutes, gradually decreasing in sound and animation until it stopped. Shortly thereafter the strangers flew off.

The parent oystercatchers chased any other large bird that attempted to land on their ledge. Gulls and skuas passing overhead evoked piping. No Black-crowned Night-Heron was ever allowed to stop on the nearby mussel bed.

#### THE FALKLAND OYSTER-CATCHERS IN RETROSPECT

LIKE NEARLY ALL of the fifty or so bird species breeding in the Falklands, the Magellanic and Blackish oystercatchers were remarkably approachable, a trait in keeping with birds isolated and breeding on oceanic islands. In contrast, our American Oystercatcher throughout its range is "one of the shyest and wildest of our shore birds, seeming ever on the alert to escape danger" (Murphy 1936, p. 977). In his detailed study of the Black Oystercatcher on Kayak Island, two miles off the coast of Sitka, Alaska, J. D. Webster (1941) required a blind for close observations.

The fact that the Falkland oystercatchers were so approachable may well account for certain behavioral responses. For example, the incubating birds deliberately walking toward me from their nests. I would have expected oystercatchers, like most shorebirds, to sneak off their nests away from me, or to fly up in alarm and circle above me. For another example, sham sleeping. Although no accounts that I have read report injury-feigning to the extent of wing-dragging or spreading and dragging the tail, as performed by many shorebirds when their nests and young are suddenly approached, nevertheless the accounts do indicate greater alarm and animation than shown by the Falkland oystercatchers whose reactions I considered low-key. Surely no reaction to intrusion could be lower-key than sham sleeping.

Magellanic Oystercatchers in southern South America apparently show far greater animation in their behavior, if I judge correctly from a recent study of their displays on the Argentine coast by E. H. Miller and A. J. Baker (1980). They illustrated their observations with many drawings from still photographs and frames selected from their motion pictures. Typical among the Magellanic's distraction displays when disturbed near the nest was exposing the underside of the tail toward the authors "while erecting and spreading the under-tail covers." Other less striking distraction displays included "crouching with sleeked plumage, slight drooping, fanning or rotation of the tail, and lowered wings kept fairly close to the body. . . . These low intensity postures sometimes merged into sequences of false-brooding . . . or crouches with the tail depressed and fanned." During pauses in "aggressive piping performances," displacement feeding was common and "characterized by unusually vigorous insertion of the bill into the ground and twisting movements." In most other respects the behavior of the Argentine Magellanics corresponded to my observations, photographs, and films of the Falkland birds.

Piping by the Falkland Magellanic and Blackish oystercatchers differed markedly in one detail. Whereas the Magellanics lifted their tails straight up, displaying the white basal portion, the Blackish never lifted their all-black tails vertically, an action that would have little if any display value. In his description of the piping ceremonies in the Black Oystercatchers, J. D. Webster (1941) does not mention the birds elevating their tails.

Frankly puzzled by the function of the piping ceremony in different situations, I reviewed much of the literature on the subject in other oystercatcher species. I found very little information on piping in the American Oystercatcher, which has been seldom studied due to its shyness and generally sparse population. In watching the species on the South Carolina-Georgia coast, I. R. Tomkins (1954) observed a few piping displays. Al-

though he did not describe them in detail, he noted that they were very much like those in the Eurasian Oystercatcher, as described by "European naturalists," and believed that the displays served "in the dual capacity of courtship and territory defense." Webster (1941, p. 155), in summarizing his study of the Black Oystercatcher, wrote: "The piping ceremony variously expresses sexual excitement, territorial jealousy, or social excitement. Pecking at the ground and bowing indicate nervous emotion." In the literature on the Eurasian Oystercatcher in Europe, where the species has a large population in the British Isles and on the continent, I found almost as many explanations for piping as there were authors. Among all the explanations given, the most logical, it seemed to me, was by P. B. Heppleston (1970) who concluded, after a study of piping displays, that piping in the breeding season "represents the main territorial response to intruders," and in the winter months piping is "evidently still aggressive in nature" and possibly operates "in the maintenance of 'individual distance' whilst feeding" as first suggested by P. J. Conder (1949). But I could find no explanation for the piping ceremony I watched at Carcass Island that was triggered by two birds suddenly joining two others foraging on the beach. Apparently piping behavior is a response not to one but to numerous situations. Just what the cues are that release the behavior remains undetermined.

Oystercatchers are notoriously nest-site tenacious and long-lived, if what the British and European ornithologists have found in the Eurasian Oystercatcher is applicable to the other species. (See D. Nethersole-Thompson 1961, for a discussion of the subject.) Pairs mate and remain mated, and they return year after year to the same nest sites. Marked individuals are known to have lived for two or three decades or even longer. One banded Eurasian Oystercatcher, when last recorded, was 36 years old (Nice 1966). While I make no claim that the two Blackish Oystercatchers nesting on Oystercatcher Rock in 1971-1972 were

the same individuals that were there in 1953-1954, or even that one individual might have been the same with a new mate, the facts nonetheless lend support to the reputation of oystercatchers for returning to the same nest site year after year and for living an unusually long time.

I am aware that my appreciation of oystercatchers would never have been attained had my sole acquaintance with *Haematopus* gone no further than with the American Oystercatcher. But now that I have observed the two Falkland species close by in a variety of situations, oystercatchers are much more to me than simply large, strikingly handsome shorebirds, always a joy to see, though so often from afar—and always ready to take flight.

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—P. O. Box 97,  
Wayne, ME 04284