# THE OCCURRENCE AND FIELD IDENTIFICATION OF SMALL "BLACK AND WHITE SHEARWATERS" IN NEW YORK

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The group of birds referred to here as the small "black and white shearwaters" consist of a number of geographical forms which are taxonomically extremely complex. Currently, most authorities recognize three species: the Manx or Common Shearwater (*Puffinus puffinus*), the Allied or Little Shearwater (*P. assimilis*), and the Dusky or Audubon's Shearwater (*P. lherminieri*). All three are in turn divided subspecifically, although only one form of each species has been recorded in eastern North America: *P. puffinus puffinus, P. assimilis baroli,* and *P. lherminieri lherminieri.*

The A.O.U. Check-list (1957) records *P. lherminieri lherminieri* as being "casual on the Atlantic coast of Florida (from Cape Florida northward), South Carolina, Virginia, New Jersey, New York, and Massachusetts (Martha's Vineyard)"; lists two North American records for *P. assimilis baroli;* and aside from the statement that *P. puffinus puffinus* breeds on Bermuda, only three North American records are listed: New York (Long Island), Newfoundland (St. Anthony; 60 miles east of Cape Race), and Greenland (Umanak).

In the past few years there have been a number of sight records and additional specimens of small "black and white shearwaters" from New York. This paper is an attempt to call attention to these records and to discuss the field identification of these birds.

The major difficulties that arise from the evaluation of sight reports results mainly from misleading statements in field guides [at least two recent reports of Audubon's from New Jersey, (Cutler, 1953; Russell, 1963) mention dark legs], the lack of experience of American observers with *any* of the three species, and probably, to a certain extent, from preconceived ideas of what should occur.

Because such authorities as Griscom and Snyder (1955:23) take the extreme position that " . . . in no case can sight records or photographs prove the species of so critical a group as the smaller shearwaters," many observers are reluctant to report these birds, and those that are reported are seldom published.

**Records of Small "Black and White Shearwaters" from New York:**

1887, August 1. Great South Bay (opposite Bellport), Suffolk Co. Audubon's Shearwater. Captured alive by Capt. Joshua Ketcham (Dutcher, 1888). AMNH 64, 714.

1917, August 30. Ocean Beach, Fire Island, Suffolk Co. Manx Shearwater. Found dead by Henry Thurston (Dwight, 1923), AMNH 349, 273.

1938, July 24. Long Beach (near Point Lookout), Nassau Co. Audubon's Shearwater. Found dead, "after an extremely rainy week accompanied by southerly winds," by Ralph Lind and Robert Rorden (Lind, 1939). AMNH skeletal collection no. 4, 110. Although the date is listed as 24 July in the **Auk**, the date on the specimen label is 25 July.

1950, ca. September 5. Short Beach, Nassau Co. (Richard Ryan).

1951, July 31. Dix Hills, Suffolk Co. Audubon's Shearwater. Found dead along the Northern State Parkway by E. H. Costich. Tackapausha Museum alcohol collection.

1951, September 4. Cedar Beach, Suffolk Co. Audubon's Shearwater. Found dead by E. H. Costich. Tackapausha Museum skeletal collection.

1952, July 9. Gardiner's Bay (about one-half mile off Orient Beach) Suffolk Co. Flock of nine birds. (Alperin, 1953).
1955, ca. August 14. Marine Park, Staten Island (Richmond Co.). Audubon's Shearwater. "An exhausted individual sitting on the water just off the beach" after hurricane "Connie" (Casimir Redjives). Photographed in color (figure 1).
1957, May 25. Rockaway Beach, Queens Co. (Geoffrey Carleton and Pauline Messing).
1957, June 1. Shinnecock Inlet, Suffolk Co. (Paul Buckley and Neal Smith).
1957, June 14-20. Mecox Bay, Suffolk Co. (Paul Buckley, Christopher McKeever, et al).
1958, ca. August 10. Jones Beach, Nassau Co. (Walter Sedwitz).
1959, ca. May 31. In the vicinity of Ambrose Lightship (Henry Ryan).
1962, May 27. Five miles southeast of the Jones Beach tower, Suffolk Co. Manx Shearwater. Photographed in color by Peter Post and Norman G. Levine (figures 2 and 3).

Of the fourteen records listed above, five are specimens (one Manx and four Audubon's), two are photographic records (one Manx and one Audubon's), and seven are sight records. Because of the difficulties, already mentioned, in the evaluation of sight reports, most descriptions are useless. Further, in many cases there is virtually no description other than that which identifies the bird as a small "black and white shearwater."

The birds seen by Alperin and H. Ryan were not identified as to species. Alperin, however, writes: "the flight . . . was not typical of the larger species; [there was] frequent flapping."

The bird observed by Carleton and Messing, originally reported as a Manx (Nichols, 1957:328) was later retracted as not being positive (Anon., 1959). Recently, however, Carleton became convinced that the bird was indeed a Manx. He distinctly remembered the extensive amount of black on the cheeks, but was not aware that this was a distinctive point until demonstrated on museum specimens. Post et al also observed this same point: "the black cap blended into the white cheeks." Buckley, R. Ryan, and Sedwitz (who has had previous experience with Audubon's) also believed the birds they saw to be Manx Shearwaters

Both Buckley and Post reported the size to be about two-thirds that of the accompanying Sooty Shearwaters (*P. griseus*). The bird seen by Sedwitz was smaller than the Sooty it was with, or about two-thirds the size of a Herring Gull (*Larus argentatus*).

All the observers believing the bird(s) they saw to be Manx mentioned that the flight was as in the larger shearwaters: "sail and bow like the large shearwaters, then several flaps. Fast" (Carleton); "similar wing beat as Sooty . . . had the flap and sail of the larger shearwaters" (Sedwitz); "flew like the Greater Shearwater (*P. gravis*) although it flapped more often" (Buckley; the Mecox bird); "regular pattern of flapping and sailing . . . several shallow, stiff winged flaps and a sail. Extremely fast. Wide ranging" (Post).

Buckley (the Mecox birds) and R. Ryan reported bright pink legs and feet. Post observed that the individual he saw had flesh colored legs (as in a Herring Gull), while the webs were bright pink.

The Shinnecock bird, observed by Buckley, was "wholly black above." Carleton reported essentially the same: "almost black above." The bird seen by Buckley, at Mecox, and the one seen by Post, off Jones Beach, however, were under observation for a considerable period of time, at extremely close range, and in bright sunlight. At a distance they appeared very black and white, but at close range the upperparts appeared "tinged" with brown.

Buckley reported that the undertail coverts of the Mecox individual were white, while in the Shinnecock bird they appeared dark. The Mecox bird was noted to be proportionately long winged.

It should be noted that four of the sight records fall within the period 27 May to 20 June. An analysis of all specimen records of Manx and Audubon's Shearwaters, from the western North Atlantic (Post, in preparation) strongly suggests that any small "black and white shearwater" occurring in the northeastern United States before July is almost certainly a Manx. The latter species is now apparently of rare, but regular occurrence in New England waters. Six "black and white shearwaters" collected in Massachusetts, during August and September, between 1950 and 1957, were all Manx (Snyder, 1958).

FIELD IDENTIFICATION:

The following is based largely on Murphy (1936), Witherby (1940), Palmer (1962), an examination of specimens in the American Museum of Natural History, New York City, the writers experience with *P. puffinus puffinus* in life, and various photographs. Warham (1958) published an excellent series of photographs of the western Australian subspecies of the Little Shearwater (*P. assimilis tunneyi*), including a flight shot. A photograph of the Madeiran form, as well as excellent photographs of the Manx Shearwater, can be found in Lockley (1947). A photograph of an Audubon's Shearwater appears in Bent (1922).

Although the Little Shearwater is not known to have occurred in New York, it has occurred twice in North America — South Carolina, and Nova Scotia. Because of this and the distinct possibility that this species may occur in state waters, any discussion must take this form into account.

Only those races that have actually occurred in North America are described. The brown-backed, dark under tail coverted Belearic race of the Manx Shearwater (*P. puffinus mauretanicus*) travels through the Straits of Gibraltar into the Atlantic and up European coasts into the North Sea in late summer, and is a possibility in American waters. A discussion of the field identification of this form (including a sketch) is given by Nicholson (1952).

*Manner of Flight*: The flight of each of the "black and white shearwaters" is distinctive and probably constitutes the best way to tell them apart in the field. It is extremely difficult to visualize differences in flight, however, from verbal descriptions, unless one is familiar with the species in life. Judging by flight alone, upon seeing an unfamiliar petrel for the first

time one frequently cannot be sure which species is involved, unless one has had some previous experience with its similarly patterned counterpart.

The flight of all the species of shearwaters found in the North Atlantic is a function of size; the smaller the bird, the more flapping or fluttering, and the more rapid the wing beat. Statements such as those found in Peterson (1947:246) that the Manx flies more like the larger shearwaters while the Audubon's flaps much more, although true, are misleading, as the former species has a much more rapid beat than the larger shearwaters occurring in the North Atlantic.

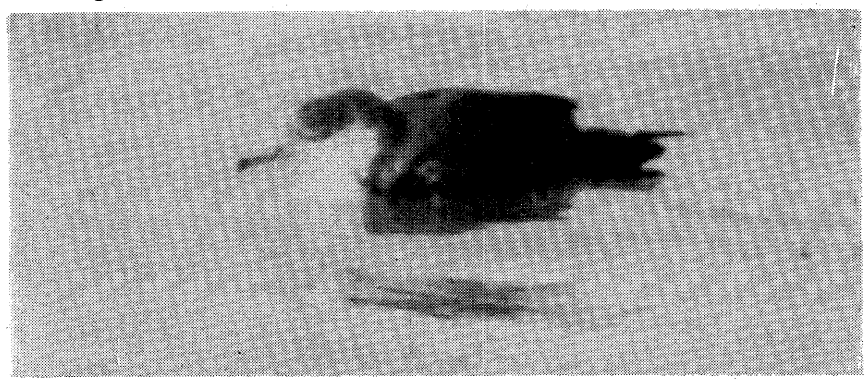

**Figure 1**
**Audubon's Shearwater. Marine Park, Staten Island, New York. ca. 14 August 1955. Note the large amount of white on the head and in front of the eye, relatively long and massive bill, and short wing. (reproduced from an ektachrome transparency).**

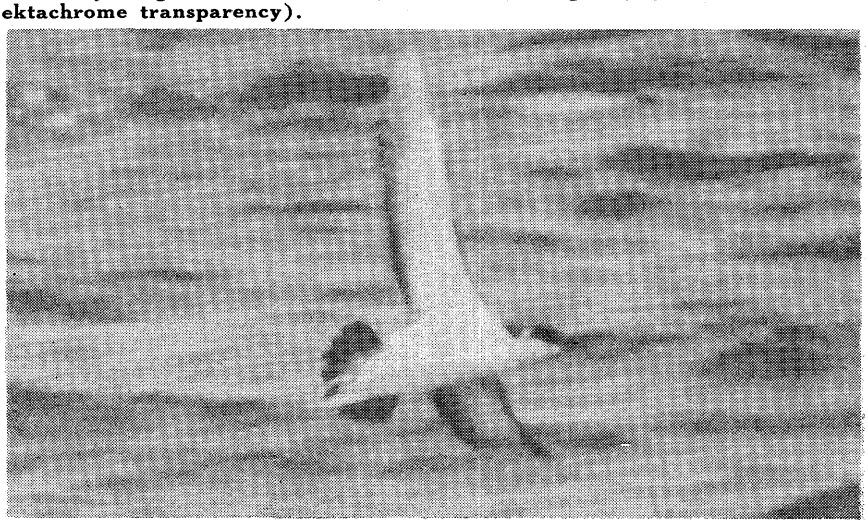

**Figure 2**
**Manx Shearwater. Five miles southeast of the Jones Beach tower, Suffolk, Co., New York. 27 May 1962. Note the relative long wings and short tail, almost pure white underwing, breast and belly, largely white flanks and under tail coverts, and light colored legs. (reproduced from an ektachrome transparency).**

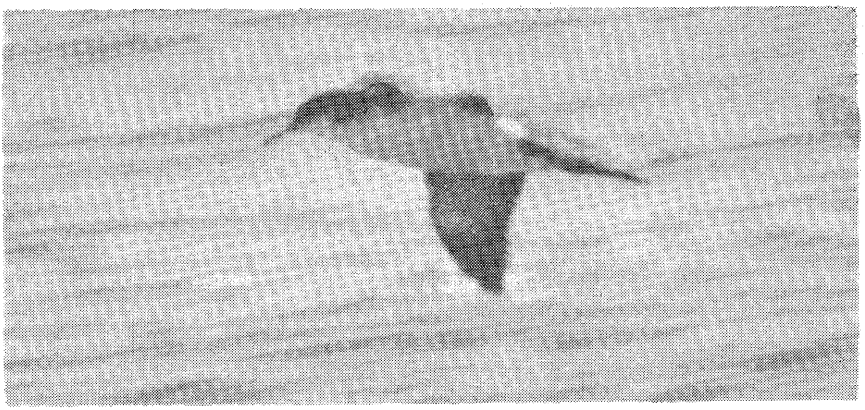

**Figure 3**
**The same bird pictured in figure 2. Note the great extent of black on the head, and the large bill. (reproduced from an ektachrome transparency).**

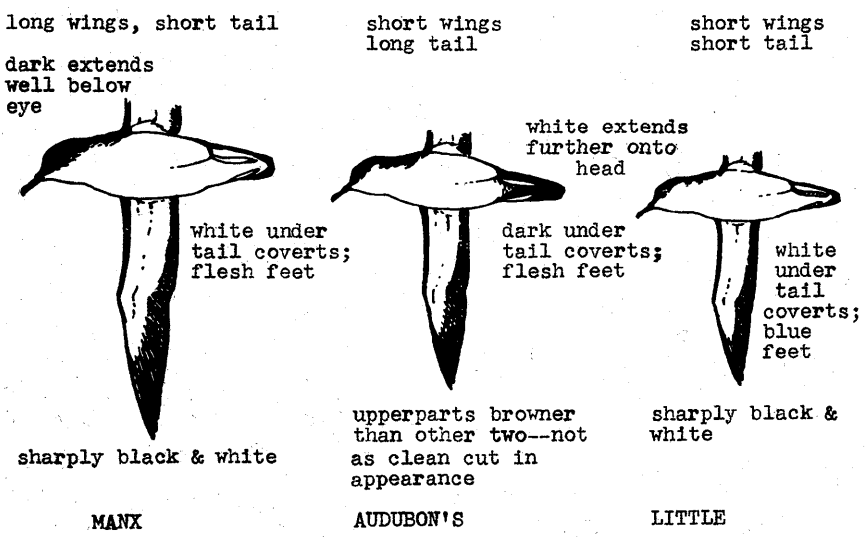


**Figure 4**
**Drawing of P. p. puffinus, P. l. lherminieri, and P. a. baroli; illustrating their distinctive differences in the field.**

The flight of the Manx Shearwater may be described as rapid gliding on rigid wings, held straight or slightly bent, alternately flashing black above and white below as the bird careens " . . . from side to side, now skimming the water for fifty yards with one wing-tip, then rising to about ten feet above the surface, beating its wings once or twice or thrice to gather momemtum, then skimming the sea for a similiar distance with the other wing down" (Lockley, 1947:15, and other sources). Their flight is more mobile than the larger shearwaters (Bourne *in* Palmer, 1962:189).

The flight of the Audubon's Shearwater has been most aptly described by the person whose name the species bears: " . . . they flap their wings six or seven times in succession, and then sail for three or four seconds . . . On approaching a mass of weeds, they raise their wings obliquely, drop their legs and feet, run as it were on the water, and at length alight on the sea . . . " (Audubon, 1835:620). Their wings are flapped very rapidly in flight and there is " . . . much wheeling and fluttering in calm air . . . " (Bourne *in* Palmer, 1962:199).

During flight the Little Shearwater's " . . . wings beat very rapidly, almost whirr, during flutter so that it hurtles through [the] air almost like a small auk" (Bourne *in* Palmer, 1962:195), the " . . . impression given being one of great haste, but little speed . . . " (Lowe *in* Witherby, 1940:48). As in the Audubon's this bird sometimes drops its feet and "runs" on the water (Tucker *in* Witherby, 1940:49).

The flapping or fluttering of these birds varies to a certain extent with weather conditions. In calm air the Manx Shearwater has a "rather fluttering flight." Under stormy conditions the Audubon's and Little Shearwaters may bank and glide as the large shearwaters; but their wings beat much more often.

*Color of Plumage and Soft Parts*: In flight, the Manx and Little Shearwaters appear very black and white. Audubon's Shearwater shows less contrast as the upperparts are a "rich dark brown." With wear, however, the upperparts of the Manx and Little Shearwaters take on a brownish hue; this is never as marked as in Audubon's and in the field shows only in good light and at close range.

The inner webs of the primaries in the Little Shearwater are white, and according to Bourne (*in litt.*) this character shows in flight. In the Manx and Little Shearwater the primaries are fully dark.

In general the under tail coverts of the Manx and Little Shearwaters are white and extend almost to the tip of the tail. The under tail coverts of Audubon's Shearwater are brown; in flight the whole underside of the tail, therefore, appears black, and the white below appears nearly restricted to the belly.

In the Manx Shearwater the dark of the cap extends well below the eye, blending into white at the level of the gape (in the field, however, this may appear sharply demarcated). In the Audubon's and Little Shearwaters the amount of white on the face is much more extensive; the dividing line with the dark cap passes through the eye.

The outer side of the tarsus and outer toe, on all these birds, is black. The remainder of the leg and foot in the Manx Shearwater is "whitish flesh"; "flesh" in Audubon's; and "lavender" in the Little Shearwater (following the color standard in the *Handbook of North American Birds*). The statement in Peterson (1947:246) and in Peterson, Mountfort, and Hollom (1954:292) that the foot color of the Audubon's Shearwater is "dark" and not "pink" is an error. This error is also found in Pough (1951:15). He gives the foot color of the Audubon's as "slate-blue." Eckelberry's plate of this species, however, in the same book, depicts the foot color correctly.

It is important to emphasize the amount of individual variation in this group of birds which makes the use of plumage characteristics uncertain. This is probably the basis for Gordon's statement that an examination of specimens " . . . indicates that the color of the under tail coverts is not a reliable character for distinguishing these species from one another" (1955:140). *P. puffinus puffinus* also shows much individual variation in the amount of mottling on the cheeks and underparts. In general, however, the plumage characters are useful, especially when taken in combination with flight, proportions, etc.

*Size and Proportions*: In flight, the Manx Shearwater appears about two-thirds the size of a Sooty Shearwater; Audubon's Shearwater about one-half the size of a Sooty; and the Little Shearwater slightly larger than a Leach's Petrel (*Oceanodroma leucorrhoa*).

The Manx Shearwater is a proportionately long winged and short tailed bird; Audubon's Shearwater is proportionately shorter winged and longer tailed; and the Little Shearwater is proportionately short winged and short tailed.

## IDENTIFICATION OF THE NEW YORK PHOTOGRAPHIC RECORDS

At a meeting held in the American Museum of Natural History, New York City, in July 1962, W.R.P. Bourne, R. A. Falla, R. C. Murphy, and D. L. Serventy, four of the world's experts on oceanic birds, examined the photographs presented herein. They all agreed that figure 1 is an Audubon's Shearwater, and that figures 2 and 3 are a Manx Shearwater. Recently, Bourne has kindly re-examined the photographs at my request. His comments follow below.

It will be useful at this point to say a few words on the taxonomy of these forms. The small "black and white shearwaters" fall into two groups, which, depending on one's taste, can be treated as a single species or as a superspecies. Currently, most authorities treat the big ones as a single species and the small ones as two. This is the arrangement followed in the *Handbook of North American Birds*. Because they show exact parallel types of variation, Bourne (*in litt.*) now feels "inclined to regard each group as a single species with two well marked groups of races." Further:

"I would now urge that the Little and Audubon's Shearwaters should be combined under the name **"assimilis"** instead of being treated as two species. Both the big Manx Shearwaters **P. puffinus** and the small Little Shearwaters **P. assimilis** can then be treated as having two distinct groups of small, black-backed, very white bellied cool-water races **P.p. puffinus** and its allies, and **P.a. assimilis** and its allies; and large, brown-backed, less white-bellied warm-water races **P.p. opisthomelas** and its allies and **P.a. lherminieri** and its allies."

With this in mind Bourne proceeds to identify the flight shots. The "rather long bill" rules out the small black-backed, white bellied members of the *P. assimilis* group, while the relatively long wings and general proportions place it in the *P. puffinus* group. The " . . . almost pure white underwing, breast and belly, and largely white flanks and under-tail-coverts . . . " suggest one of the black-backed, white bellied members of the group. "In the North Atlantic presumably the typical Manx Shearwater *P.p. puffinus* itself, since the Mediterranean races should show more marking on the flanks and under tail coverts. This agrees pertty well with the geographical probability in any case."

Similarly, Bourne identifies the photograph of the sitting bird. The amount of white on the side of the head and in front of the eye and a "shorter wing than is usual in the big Manx Shearwaters" place it in the Little Shearwater group. The "bill . . . is relatively long and massive for the small, black-backed northern races . . . which suggests it may be one of the big, brown-backed tropical populations of the group. In the North Atlantic this presumably means 'Audubon's Shearwater' *P. (assimilis?) lherminieri,* which again agrees with the geographical probability."

Bourne concludes by stating:

"It is of course difficult to be completely certain about this sort of record if proper notes of the bird were not made at the time; but, if these notes are available I should think that these identifications while no means perfect (they seldom are at sea) could be regarded as **established beyond reasonable doubt"** (emphasis mine).


## ACKNOWLEDGEMENTS

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## ARTIFICIAL NESTS FOR CLIFF SWALLOWS

CARLETON A. STURDEVANT

One May morning in 1939, as I came from the barn to the house, I heard a peculiar grating and squeaking noise. Following this sound, I found a pair of Cliff Swallows (Petrochelidon pyrrhonota) just starting to build a nest not more than fifteen feet from the ground under the eaves of the woodhouse.

As I had not seen any of these birds locally for nearly twenty years, I watched them building a nest. Because of the new paint on the house, the mud did not stick and on the second day the nest, now one-third finished, cracked loose and fell to the ground. The birds immediately started rebuilding and out of pity I drove three nails into the house for nest support. This proved successful and by late July the young had been raised and left the nest.

In the spring of 1940, five pairs of swallows returned and with the aid of more nails, these birds built nests and had a successful nesting season. At this point I thought of the idea of making artificial nests for Cliff Swallows. I talked to Mr. Charles Spiker and Mr. Verdi Burtch. Both of these men, now deceased, were skeptical but thought the experiment worth trying.

From carefully removed mud nests, I made many measurements as to size of entrance opening, depth and width of nest cavity and general form. Attempts at making removable molds failed regularly, for in spite of greasing and oiling, the woodfiber plaster would stick to the wood forms and during attempted removal of the cores, the nests broke. At this point, as I nearly gave up, the idea came to my mind of using sponge rubber for a core and covering the outside with woodfiber plaster applied with a putty knife.

After fashioning a form to make the identation for the wood cover and placing this form on top of the rubber core, I inverted everything, placed it on a board, made two ears out of a metal strap for holding the finished nest up to the eaves, fastened these to the base board in such a way that their ends would be imbedded in the plaster Then I proceeded to cover the core with about one-half inch of plaster, smoothing this off with the putty knife. When the plaster was dry I removed the screws holding the metal ears to the board. This allowed me to pick up the nest, remove the wood form that made the indentation for the wood cover, and pull out the sponge