

# Pacific Seabird Group



## BULLETIN

Volume 7    Number 1

Summer 1980

PACIFIC SEABIRD GROUP  
BULLETIN

---

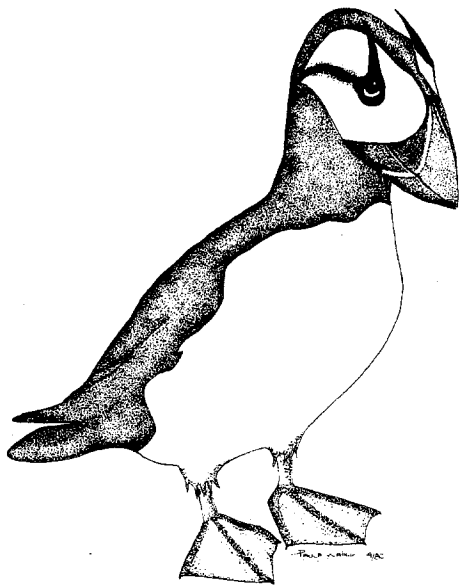
Volume 7

SUMMER 1980

NUMBER 1

---

The Editor's Page .....	3
The Chairman's Page .....	5
Pacific Seabird Group News .....	7
Scientific Translations Committee .....	8
Regional Reports	
Alaska .....	10
Washington .....	12
Oregon .....	14
Northern California .....	15
Southern California .....	17
Central Pacific .....	18
Eastern Canada .....	19
Eastern United States .....	20
Letters .....	23
Marine Habitat Protection .....	27
New Publications .....	31
Bulletin Board .....	36
New Members .....	37
Committee Coordinators .....	38
Other Seabird Groups .....	39



## THE EDITOR'S PAGE

The PSG Bulletin is a vehicle for members to communicate with each other and with others interested in the biology and welfare of seabirds. The Editor does not create the messages to be communicated: he merely facilitates their transmission. Sometimes he may have a message of his own. The health of the Bulletin depends on the contributions of all members. What you have to say will get published only if you send it to me, however.

As a new Editor I have asked myself what has been good in past Bulletins and what has not been so good. I have some ideas, but I'd like more information on what the members want and need. Please send me your ideas and opinions on ways in which the Bulletin can be improved.

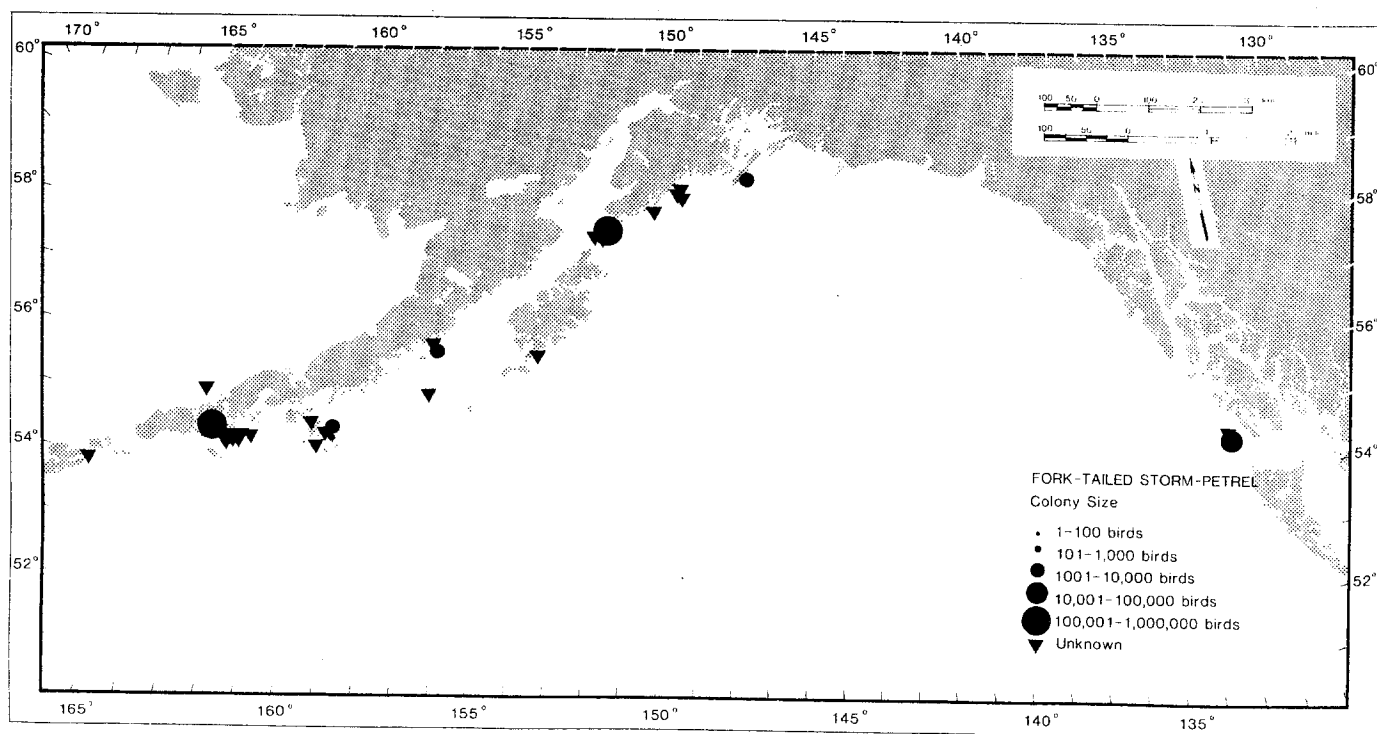
Nothing can undermine the communicative value of this publication or dishearten the members more than increasing delays in publication. This issue will bring the publication of the Bulletin almost back on schedule. I plan to produce both 1980 issues in 1980. The preparation of this issue has shown me that many people who have contributions don't send them to the Editor until requested to do so. As there is no backlog of manuscripts for the Bulletin, I must wait until enough material has been received before putting together an issue. Please don't wait for me to ask; send me material as soon as it comes to mind. I prefer that someone send me a page once a month rather than six pages two weeks before the Bulletin is to appear. The deadline for material to appear in the 1980 winter issue is 1 December. If you wish to see more than meeting abstracts send it now.

There is increasing political and economic pressure to speed up the exploration for and development of petroleum reserves in the Bering Sea. It is important that PSG formulate a policy on Bering seabirds and sway the funding agencies to insure that seabirds are not neglected when research and development decisions are made. The funding agencies currently do not see a clear need for further seabird research. We need to convince them that there is one. I welcome contributions to the Bulletin addressing this problem.

I shall continue the tradition of publishing illustrations in the Bulletin, however, I would like to see more of an informative nature. It is too much of a burden on PSG funds to use an entire page for a decorative illustration, and I therefore prefer to restrict illustrations to natural blank spaces in the text. Past efforts to publish half-tones of color pictures have been unsatisfactory and I shall discontinue the practice. I welcome submission of black-and-white illustrations, informative or otherwise, for publication in the Bulletin and will use as many as possible.

The new cover layout which appears on this issue is the work of William Trujillo of the SAI Graphics Staff. I hope everyone likes it as much as I do. The distributional maps of colonies of Alaskan seabirds were produced by the SAI Graphics Staff for publication in the NOAA/OCSEAP Kodiak Interim Synthesis Report - 1980. They were based on data in the Catalog of Alaskan seabird colonies by A. L. SOWLS, S. A. Scott, and C. J. Lensink, U.S. Fish and Wildlife Service (see new publications).

Joseph G. Strauch, Jr.  
Editor



## THE CHAIRMAN'S PAGE

During the past two years I have spent considerable time and effort investigating the pros and cons of starting a new publication devoted to marine and colonial birds. The plan was to provide a speedy outlet for papers and to publish extensive data inexpensively. The new publication was to be an alternative to the "established" journals, which have long delay times and which are now publishing primarily summaries of studies because of high page charges. I have discussed this new journal extensively with ornithologists in this country, Great Britian, and South Africa and corresponded with other sea-bird people around the world. I contacted editors and publishers of various journals, ornithological and otherwise, for their comments and suggestions, and even found an individual who offered to help underwrite the initial cost of publication.

Considerable enthusiasm exists for a new journal dealing with marine birds and waders and/or shorebirds, and the need MAY exist for a publication similar to what we have in mind. However, especially after discussion with the editors of U.S. bird journals, I am not convinced that a sufficient number of publishable manuscripts are now being rejected because of lack of space to justify a new publication. Additionally, I found a major problem in the cost of a new journal: there is considerable interest in having a journal that is right-justified, but this adds considerably to the cost. Printing 400 - 500 pages per year in two issues, 8.5 x 11 inch size, with a soft yet durable cover (such as is used for the Living Bird), both glued and stitched, costs approximately \$25,000 per year for 1000 copies. At this cost the author must provide camera-ready copy to the editor, either at his own expense or by paying the journal to do so. With 1000 subscriptions necessary, the cost per individual would be \$25.00 per year.

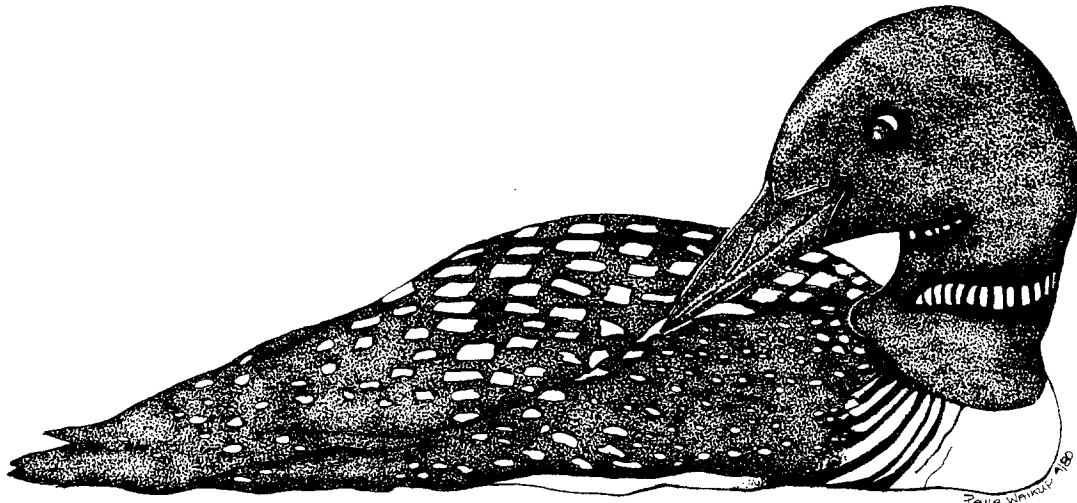
In discussions with the Seabird Group of Britain, the Southern African Seabird Group, the Colonial Waterbird Group, and the Pacific Seabird Group, I find no assurance that we can find 1000 subscribers (including private individuals, libraries, and other institutions) willing or able to pay \$25.00 for a new journal.

While I remain convinced that such a journal will eventually be published, and continue to be interested in such a publication venture, I think it is not financially feasible for PSG to become involved in such a project now. If, in response to this notice, I receive indication that sufficient subscriptions would be forthcoming, I stand ready to undertake publication with an editorial board. Otherwise, I am willing to provide my data and advice to any individual or organization interested in becoming involved.

I appreciate all of the help I received, especially from Joe Jehl, Bill Bourne, Tim Birkhead, Chris Mead, John Cooper, Betty Anne Schreiber, and Steve Speich.

For the past two years Jim King has served the PSG as the Editor of this Bulletin. He has asked to be relieved to pursue other duties and the editorship has now passed to Joe Strauch. Thank you, Jim, for the time and fine work devoted to producing the Bulletin; we trust you will continue to be active in other ways in the PSG. Welcome, Joe, as our new Editor. I and all the membership will do all we can to help you to keep up and improve the quality of the Bulletin.

Ralph W. Schreiber  
Chairman



## PACIFIC SEABIRD GROUP NEWS

### Annual Meeting

The Seventh Annual Meeting of the PSG will be held in Tucson, Arizona, on 19 - 21 November 1980. Three full days of meeting are planned. Arrangements are being made for a field trip to Puerto Penasco, Sonora, Mexico. The trip will include a pelagic boat trip. Plan now to attend.

Palmer Sekora, Program Chairman  
Douglas Siegel-Causey, Local Chairman

### Defective Copies of the Winter 1979 Issue

Some copies of the Winter 1979 issue were improperly bound. If you received such an issue, please write to the Secretary, Paul F. Springer, for a replacement.

### Moving Members

When a member moves and neglects to inform the Treasurer, the copy of the Bulletin sent to his old address is destroyed by the U.S. Postal Service, PSG must incur the expense of sending him another copy, and the member receives his Bulletin late. Don't let it happen to you. The only way the PSG can keep current with your local habitat is if YOU send us the address. Please, when you move or change mailing address, notify the Treasurer, B. A. Schreiber, 900 Exposition Blvd., Los Angeles, CA 90007, immediately.

### 1980 Dues

Any member who has not paid his 1980 dues is now very much in arrears. If you want your Winter 1980 Bulletin, please send your \$5.00 to the Treasurer today.



## SCIENTIFIC TRANSLATIONS COMMITTEE

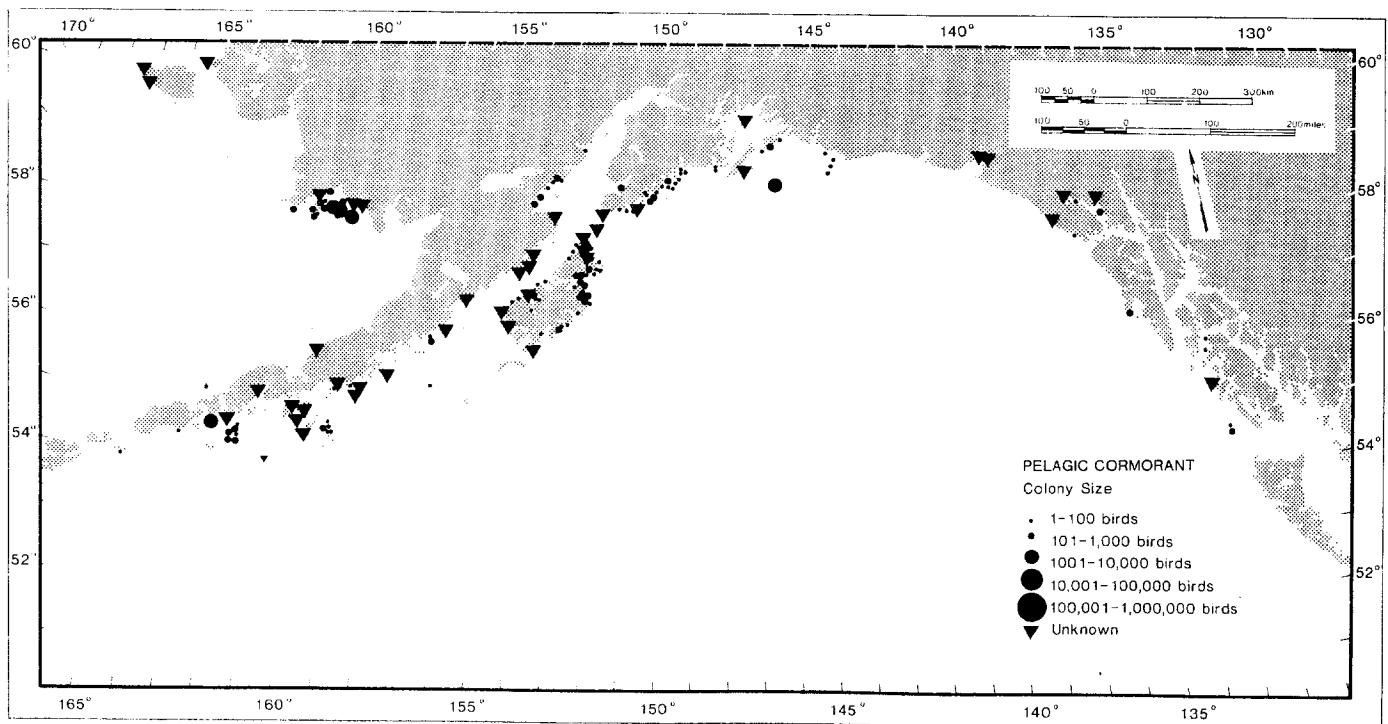
The PSG Committee on Scientific Translations was created at the 1979 PSG Executive Committee meeting at Asilomar with Doug Siegel-Causey as Chairman. This committee has five main functions:

- (1) to produce a directory of PSG members who are familiar with a foreign language, and are willing to be identified. Translating can be tiresome and time-consuming: most of us would shy from accepting such an occupation. However, researchers who wish a key reference translated can use the directory as a starting point. The directory is being compiled; requests for help should be addressed to me.
- (2) to provide abstracts of scientific studies pertinent to the PSG. Some of the people in (1) feel energetic enough to briefly scan the foreign literature to which they have access and summarize the main points. The articles will be limited to those of seabirds of the Pacific basin, and will be published in the PSG Bulletin.
- (3) to develop and strengthen contacts with foreign ornithological societies in the Pacific basin. It would be interesting to know what seabird research is being done in Latin America, the South Pacific, Orient, and Eurasia.
- (4) to evaluate monographs in foreign languages on seabirds for eventual translation. There exist means to have ornithological monographs translated by federal and other agencies, and this committee can start this arduous process with a fair degree of success. "Seabirds of the World Ocean" by Shun'tov is a good example of the type of monograph that could be translated.
- (5) to search out existing translations and provide access to them. Every group researching seabirds seems to have a file of translated papers yellowing with age and neglect. This committee has begun to track these translations down and send them, or a copy, to the Josselyn van Tyne library of the Wilson Society. This is a lending library easily accessible

and cheap (mostly free) to use. A notice of seabird references so acquired will be published in the PSG Bulletin.

PSG members who would like to be included in the directory, be members of the Committee on Scientific Translations, or know someone who would, are requested to write to me. Suggestions, or comments on the functions of this Committee are urgently needed.

Douglas Siegel-Causey  
Department of Ecology  
University of Arizona  
Tucson, Arizona 85721



## REGIONAL REPORTS

ALASKA, R. E. Gill, Jr.

### U.S. Fish & Wildlife Service

The Biological Services Program - Coastal Ecosystems (BSP-CE) of the U.S. Fish & Wildlife Service is currently involved in the following projects:

1. Preparation of a final report summarizing the distribution and abundance of marine birds in Alaska waters (P. Gould, D. Forsell, and C. Lensink).
2. Preparation of a final report summarizing results of studies on the breeding biology of seabirds in the Gulf of Alaska (P. Baird and C. Lensink).
3. Preparation of a final report on the feeding habitats and trophic relationships of marine birds wintering in Kachemak Bay (G. Sanger).
4. Preparation of a final report on the feeding habitats and trophic relationships of marine birds in Kodiak in spring and summer (G. Sanger and L. Krasnow).
5. Preparation of a final report on seasonal feeding habits and trophic relationships of seabirds in the Gulf of Alaska and southeast Bering Sea. This is an integration of all FWS/OCSEAP data collected at sea and on colony between 1975-1978 plus data collected south of the Aleutians by NMFS from 1969-1974.
6. Monitoring the development of a pioneering capelin fishery in Kodiak.
7. Continuation of studies of shorebirds on the Yukon-Kuskokwim Delta. (R. E. Gill, Jr. and C. M. Handel).
8. Survey of seabird colonies in the eastern Aleutian Islands (D. Forsell and D. Nysewander).

9. A study of migration and distribution of waterbirds in the area of Yakutat Bay (M. Petersen).
10. A study of the potential impacts of a hydroelectric project on migrating shorebirds and waterfowl in upper Kachemak Bay (L. Krasnow).
11. Continuation of a study of the Northern Fulmar and other seabirds on the Semidi Islands (S. Hatch).

BSP-CE, in cooperation with the Kodiak National Wildlife Refuge, has just completed the final draft of "Distribution and abundance of seabirds wintering in the Kodiak area of Alaska." This was a field project funded by the Bureau of Land Management and conducted between November 1979 and March 1980.

#### University of California at Irvine

Pelagic Distribution of seabirds in relation to the ocean ecosystem - In cooperation with the PROBES study of productivity in the southeastern Bering Sea, G. Hunt, Schneider and others at UC Irvine are examining the distribution of seabirds in relation to physical and biological oceanographic features. In particular, oceanographers with PROBES have identified a series of domains in which different physical features of the ocean results in changes in the pattern of energy flow through the system. Preliminary evidence suggests that bird populations differ over these domains and reflect the different food chains of the various domains.

#### Point Reyes Bird Observatory

A study of waterfowl distribution and habitat in Norton Sound (G. Divoky and D. Woodby).

Continuation of bird studies at Cooper Island, Beaufort Sea, and studies of bird/ice edge associations (G. Divoky).

Mapping of coastal habitat in the northeast Bering Sea (G. Divoky and D. Woodby).

The John Hopkins University

Assessment of waterbird use of the Yakutat area (S. Patton). (Editor's note: This summer Sam found a colony of about 2100 Aleutian Terns and about 900 Arctic Terns on Blacksand Spit, near Yakutat Bay [fide L. Jarvela, OMPA Alaska Field Office, Juneau, AK]. This represents one of the largest concentrations of breeding Aleutian Terns recorded.)

WASHINGTON, L. L. Leschner

Washington Dept. of Game, Olympia, WA.

Census of nesting birds, study of the activity patterns of Pigeon Guillemots and Rhinoceros Auklets and Harlequin Ducks and foraging activity of marine birds on Protection Island. Funded by USF&WS (K. V. Hirsch and L. L. Leschner).

Study of the Rhinoceros Auklet as an indicator of marine conditions (L. L. Leschner in cooperation with U. Wilson, USF&WS, Willapa National Wildlife Refuge).

Banding of cormorants, shorebirds, Caspian Terns, and gulls in Grays Harbor (F. Hosea and J. Smith).

Development of a response plan for the Game Department on bird and mammal assessment. Part of an interagency plan for marine resource damage assessment coordinated by Washington Department of Ecology (L. L. Leschner).

U.S. Fish and Wildlife Service, Willapa National Wildlife Refuge, Ilwaco, WA.

Study of the distribution and abundance of Black Brant wintering in Padilla Bay (U. Wilson).

Study of the nesting of Snowy Plovers on Leadbetter Point (U. Wilson).

Study of the Rhinoceros Auklet as an indicator of marine conditions (U. Wilson and L. L. Leschner, WDOG).

Seattle Public Aquarium, Seattle, WA.

Study of the food utilization and growth of captive Rhinoceros Auklets and Pigeon Guillemots (G. Ballew and J. Nightengale).

Study of burrow configuration, temperature and gas parameters of Rhinoceros Auklet burrows on Protection Island (G. Ballew, J. Nightengale, and D. Kilgore, Univ. of Montana).

University of Montana, Missoula, MT.

Study of physiological studies of Rhinoceros Auklets and studies of gas exchange within burrows (D. Kilgore).

University of Washington, Seattle, WA.

Wildlife Sciences Group, College of Forest Resources

Completion of NOAA report on seasonal distribution and abundance of marine birds in the Straits of Juan de Fuca and San Juan Islands (D. A. Manuwal, S. M. Speich, and T. R. Wahl).

Establishment of guidelines for marine resource damage assessment in northern Puget Sound (S. M. Speich, T. R. Wahl, and T. Miller).

Study of the parasites of marine birds (E. Hoberg).

Study of the biology of the Dark-rumped Petrel in Hawaii (T. Simons).

Institute for Environmental Studies

Study of the breeding biology of Leach's and Fork-tailed Storm-Petrels on Tatoosh Island (D. Boersma).

Study of the prey species of Fork-tailed Storm-Petrels in Barren Islands, Alaska (D. Boersma).

Walla Walla College, College Place, WA.

Study of the aggressive communications of Glaucous-winged Gulls on Protection Island (J. Galusha).

Battelle Northwest Laboratories, Ecosystem Department, Richland, WA.

Study of the nesting ecology of Ring-billed Gulls, California Gulls, and Forster's Terns (R. E. Fitzner).

Study of the seasonal use of ponded habitats by shorebirds (R. E. Fitzner).

Fecal analysis of herons in Washington for pesticides, herbicides, heavy metals and other energy-related environmental contaminants (R. E. Fitzner).

Analysis of environmental contaminants in prey species of Rhinoceros Auklets (R. E. Fitzner, L. L. Leschner and U. Wilson).

Investigation of the effectiveness of radio telemetry of Rhinoceros Auklets (R. E. Fitzner).

OREGON, M. A. Strong

U.S. Fish and Wildlife Service

A complete survey of marine bird nesting colonies along the coast of Oregon was made for the U.S. Fish and Wildlife Service during the summer of 1979 by D. Varoujean and R. Pitman. The estimated total breeding population was about 436,000 birds of 12 species, including 255,000 Common Murres and 136,000 Leach's Storm-Petrels. The survey is presently in the form of a typewritten report which is available on a very limited basis to those with an immediate need. Plans are to publish the data in an updated version of the west coast Marine Bird Colony Catalog.

## Oregon Institute of Marine Biology

D. Varoujean has moved to Charleston, Oregon, and plans to coordinate a beached bird survey of the Oregon coast using mostly volunteer surveyors. Anyone interested in helping should contact Dan at the Oregon Institute of Marine Biology, Charleston, OR 97420.

## U.S. Forest Service

On 19 November 1979, U.S. Forest Service personnel observed a flock of apparent Aleutian Canada Geese roosting on Haystack Rock near Pacific City, Oregon and feeding in pastures on the mainland. Haystack Rock is part of the Oregon Island National Wildlife Refuge. Subsequent observations revealed over 100 birds in the company of about 200 Dusky Canada Geese. This is believed to be a new wintering population of this endangered marine goose.

NORTHERN CALIFORNIA, R. Boekelheide

## Current Research

Coastal and pelagic surveys -- K. Briggs, D. Lewis, E. Chu, and B. Tyler of UC Santa Cruz are beginning pelagic surveys of marine vertebrates in potential oil lease sales of northern California. G. Page, L. Stenzel, and D. Ainley of PRBO are continuing coastal surveys of the Point Reyes area, to determine sea- and shorebird uses of inshore habitat. A. SOWLS and others of the USFWS are also continuing censuses of breeding colonies of seabirds in northern and central California. D. Anderson is continuing surveys of coastal Brown Pelican roosting areas throughout California. P. Springer and others of the USFWS continue monitoring Aleutian Canada Geese using offshore roosting sites in Del Norte County. PRBO staff continue to survey pelagic birds in the Gulf of the Farallones while in transit to and from the Farallones.

Beached bird surveys -- The beached bird survey of PRBO, headed by D. Ainley, continues in full force, with a literal army of volunteers walking beaches up and down the state. S. Harris of CSU Humboldt is also conducting beach walks and is trying to determine the rate of carcass turnover on selected beaches. G. Page, L. Stenzel, and D. Ainley of PRBO are experimentally releasing carcasses offshore to determine rates and direction of movements of these birds.



Breeding biology and ecology -- R. Boekelheide, H. Huber, C. Strong, and D. Ainley of PRBO are continuing long-term studies of the breeding and population ecology of Farallon Island birds. L. Spear of PRBO and Moss Landing Marine Lab is investigating dispersion and foraging patterns of Western Gulls. D. Nelson of the University of Michigan is continuing work on communication patterns of alcids, particularly Pigeon Guillemots, at the Farallones. D. Anderson of UC Davis, is continuing studies of Brown Pelican populations in the Gulf of California, and, with F. Gress, is investigating pelican-anchovy interactions in the southern California Bight. L. Lawlor of the University of Texas, Austin, is studying the breeding patterns of Pelagic Cormorants in Sonoma County. At Humboldt State University, M. Phillips is completing studies of the food and parasites of Common Murres. L. Hedrick, also of Humboldt, is investigating Pigeon Guillemots in Puget Sound. C. Adamson, also of Humboldt, is beginning a study of Mew Gull breeding biology.

Shorebird research -- Work on Sanderling behavioral ecology continues by F. Pitelka, P. Myers, P. Connors, and many others of UC Berkeley. B. Allen of Moss Landing Marine Lab continues studying shorebirds using Elkhorn Slough. G. Page and others of PRBO are continuing work on Snowy Plover breeding and wintering ecology. E. Burch of UC Santa Cruz is surveying shorebird habitat use at Ano Nuevo Island.

Physiological ecology -- R. Grau and L. Astheimer of UC Davis are expanding their studies of the dynamics of egg formation around the world, now working with petrel and penguin populations in New Zealand.

#### Items of interest

Beginning in September and October, 1979, water temperatures in nearshore areas of northern California became quite warm. At the Farallon Islands it was the second warmest fall of the past seven years, with water temperatures averaging at least 1<sup>0</sup>C above normal. This winter has been stormy, with regular periods of strong southerly winds apparently keeping warm Davidson Current waters at the surface. What this means for wintering birds and the prospects for the upcoming breeding period is yet unknown. The Herring spawn in San Francisco Bay, however, appeared exceptionally large this winter, leading to large feeding flocks of wintering gulls.

SOUTHERN CALIFORNIA, J. C. Ogden

University of California, Irvine

Western Gull foods and foraging - J. Sayce is continuing and expanding a long-term study of Western Gull foods and foraging on Santa Barbara Island initiated by G. Hunt. One facet of the study will examine Western Gull reproductive biology and food habits in relation to anchovy abundance in the southern California Bight. Sayce is also interested in spatial and temporal patterns of foraging and food use in relation to ideas about colonies being "information centers" allowing members to forage with enhanced effectiveness.

Western Gulls - thermal stress and chick survival - A. Salzman is following up observations of chick mortality during heat waves on Santa Barbara Island. To determine thermal loads encountered by chicks in various habitats, she has constructed models of young gulls of various sizes and has implanted them with thermocouples. Heat loads, as determined from the models, are being compared for habitats with differing microclimates.

Western Gulls - sex ratios - The Western Gull population on Santa Barbara Island appears to have a large excess of females. G. Hunt, with the help of A. Salzman and J. Sayce, is attempting to determine when and why the excess of females develops. Chicks are being sexed by laparotomy shortly after hatching and individually color banded. Reports of these birds while still alive and returns of bands to the Fish and Wildlife Services will allow us to determine sex-specific patterns of movement and mortality.

University of California, Los Angeles

Olfaction in Procellariiformes. Field studies by L. V. Hitchison, B. Wenzel, and K. Stager in Morro Bay are continuing with cod liver oil and krill homogenate. The central olfactory pathway of the Northern Fulmar is being mapped in the laboratory.

### California State University

The Least Tern Recovery Team is continuing its work. Emphasis will be on observations of the behavior and reproductive biology of banded individuals and studying the differences in foraging and growth rates among different colonies.

### Los Angeles County Museum

R. W. and B. A. Schreiber are continuing their studies on Christmas Island Pelecaniformes and the comparative behavior of pelicans. They are also studying the effects of sonic booms on Western Gulls and Brandt's Cormorants nesting on San Nicholas Island.

### Other

B. W. Massey and J. Atwood are continuing their studies of Least Terns. This year's work concentrates on foraging locations and habitats. Trips to Central America are planned to study the terns on their wintering grounds. Massey is also doing a comparative study of the vocalizations of small terns, and along with R. Zenbal is studying the Light-footed Clapper Rail.

CENTRAL PACIFIC, C. Harrison

### U.S. Fish & Wildlife Service

A study of the feeding habits of 18 species of seabirds (C. Harrison and T. Hida, National Marine Fisheries Service) should be completed by December 1980 and will comprise 4000 samples. M. Naughton and A. Newman are studying seabirds on Laysan Island from March-August. E. Knudtson spent six weeks working on Lisianski Island. S. Conant and M. Collins spent four weeks working on Nihoa. B. Schulmeister, J. Gravning, and J. Andre are studying birds year-round on Tern Island, French Frigate Shoals.

R. Shallenberger was recently appointed refuge manager for the Hawaiian Islands National Wildlife Refuge complex, which includes 10 million seabirds in the Northwestern Hawaiian Islands as well as colonies on Johnston, Howard,

Baker and Jarvis. His technical background with tropical seabirds and his conservation work with the Hawaiian Audubon Society make him an excellent choice for this position.

Surveys of offshore breeding colonies of the main Hawaiian Islands have been conducted by C. Kepler and are planned by T. Burr (Hawaii Division of Fish and Game). Plans are underway to compile a Hawaiian seabird atlas.

#### University of Hawaii

C. Whittow continues his work on various physiological aspects of the Redfooted Booby, Wedge-tailed Shearwater, and albatrosses. He collaborated with T. Petit and G. Grant in their studies of the egg physiology of albatrosses and terns on Midway Island this winter. Grant and Petit have also documented the wholesale destruction of the Midway Bonin Petrel colony by Rattus rattus. If immediate corrective steps are not taken, one of the three largest worldwide colonies of this species will soon be extinct.

#### University of Canterbury, New Zealand

J. Warham plans a visit to Midway during fall 1980 to study the behavior of the Black-footed Albatross, Laysan Albatross, and Bonin Petrel. His experience with Southern Ocean procellariids will make his studies extremely valuable.

#### EASTERN CANADA, W. H. Drury

#### Seabird Research Unit, Canadian Wildlife Service

Continuation of intensive, fine-grain cruises on the Scotian Shelf from Sable Island to Georges Bank. The association between seabirds and plankton populations will also be studied (R. G. Brown).

Studies of marine productivity and major seabird colonies in Baffin Bay (R. G. Brown).

Studies of the relationship of seabirds to fronts and other water boundaries in the Strait of Bell Isle (R. G. Brown).

Data analysis and writing in progress of studies in Lancaster Sound. A paper on the Prince Leopold Island Thick-billed Murre study is in press in the Canadian Wildlife Service Monograph series. Other papers on reproduction in murre, and Northern Fulmars, avifaunal surveys, and census techniques are in various stages of preparation or publication (D. N. Nettleship).

Completion of a survey of all major seabird colonies on Newfoundland (D. N. Nettleship).

Beginning of a three-year study of the ecology of Thick-billed Murres on Digges Sound/Hudson Strait (D. N. Nettleship).

#### Others

Completion of a study of seabird distributions in the Cabot Strait (C. Clair, Dalhousie University).

Studies of the feeding ecology of shorebirds in Minas Basin, Nova Scotia (P. Hicklin, CWS and S. Boates, Acadia Univ.).

Population study of Arctic and Common Terns at Machias Seal Island (R. Newell, CWS/Acadia Univ.).

EASTERN U.S., W. H. Drury

#### New England Coast

S. Kress's project to introduce nestling Atlantic Puffins to Eastern Egg Rock in Maine is continuing. It appears that the young released in some years have survived very much better than the young released in other years. Trial releases of Leach's Storm-Petrel nestlings were made in 1979.

I. C. T. Nisbet is gathering data on the biology of Roseate Terns in Massachusetts to determine whether the species should be given "threatened" status. Roseate Terns, like the other terns along the New England coast except Least Tern, have been decreasing during the last decade.

The U.S. Fish & Wildlife Service has undertaken a large program of reduction of the Herring Gull population on Monomoy Island. The Herring Gull population appears to be continuing its increase in the Nantucket Sound area, and many of the birds have settled on Monomoy Island, overrunning an important colony of Common Terns.

J. Portnoy of the Cape Cod National Seashore is monitoring use by gulls of kettle hole ponds on the seashore and the effect of the gulls on water quality.

#### Mid-Atlantic Coast

The U.S. Fish & Wildlife Service Patuxent Wildlife Research Center has begun a study of the nesting of Common Terns in different habitats in Rhode Island, New York, New Jersey, Virginia, and North Carolina. Eggs will be examined for levels of contaminants.

Manomet Bird Observatory is continuing a study of the distribution of marine birds on the Mid- and North Atlantic U.S. Outer Continental Shelf. The study area has been extended from George's Bank to Cape Hatteras.

Objectives are 1) to determine the spatial and temporal distribution of marine birds in Mid- and North Atlantic U.S. Continental Shelf waters, 2) to identify marine bird food habits and distribution of prey items, and 3) to develop a marine bird data retrieval bank.

The principal survey platforms continue to be "ships-of-opportunity," although in 1979 "planes-of-opportunity" were utilized. The aerial platform used was not found suitable for this study because of lack of manpower and visibility problems with certain bird species.

Data from 1978-1979 indicated that George's Bank and its adjacent waters support an abundant and diverse bird population throughout the year. Species composition changed seasonally but diversity usually remained high. In contrast, the Mid-Atlantic Bight was only seasonally important to birds. In all

areas surveyed greatest bird densities were found at upwellings, shelf break fronts, and in association with fishing activities.

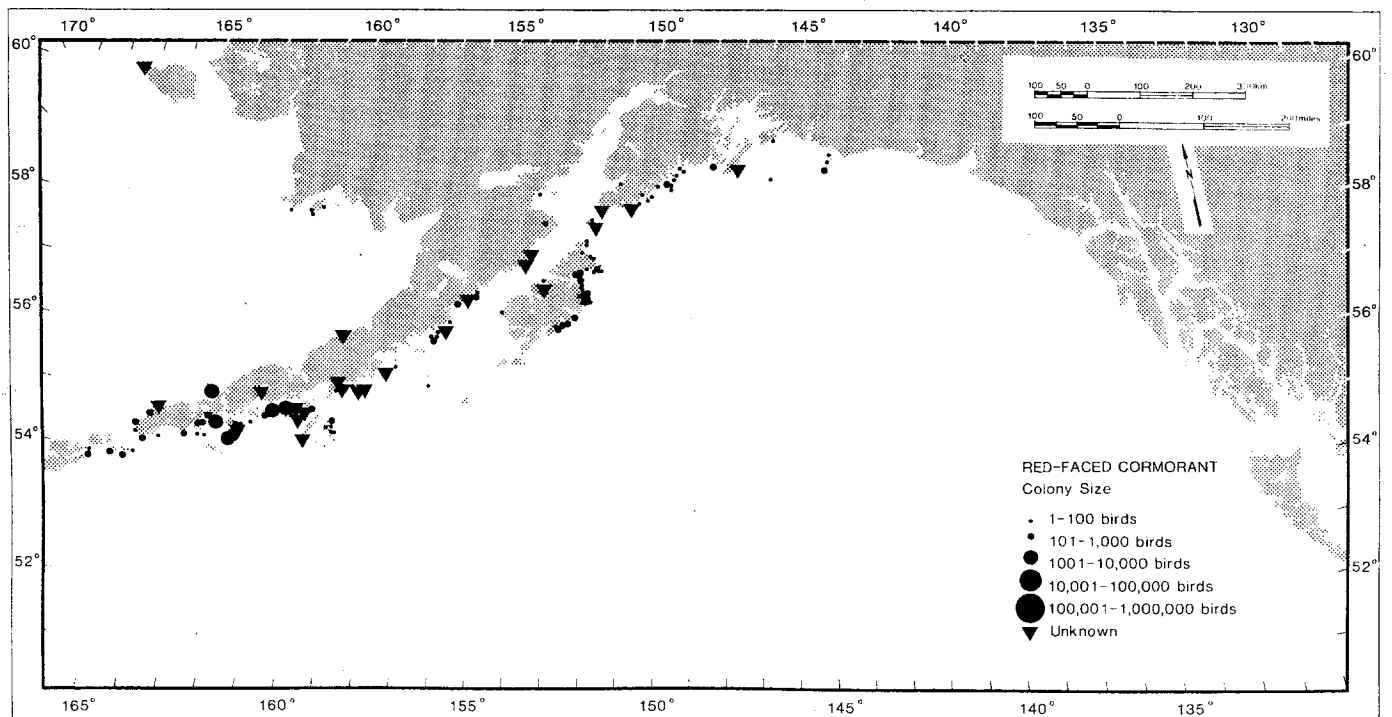
Stomach content analyses of specimens collected in August 1978 indicated that Cory's, Greater and Sooty Shearwaters were feeding on squid and fish. Great Black-backed and Herring Gulls were utilizing fish, insects, birds and crustaceans.

### South Atlantic Coast

J. Parnell and R. Soots are working on the North Carolina breeding population of Brown Pelicans to provide information on nesting phenology and success. North Carolina is the northern limit of nesting for this species for the Atlantic Coast, and the breeding population is expanding.

M. J. Erwin and staff of the National Audubon Society in Florida are working on a second year of evaluation of the use of flight line censuses to predict nesting populations of wading birds at colonies along the Atlantic Coast.

J. Kushlan is continuing his studies on the relationship of the success of wading birds feeding to the fish populations in the ponds of Everglades National Park.





# United States Department of the Interior

ADDRESS ONLY THE DIRECTOR  
FISH AND WILDLIFE SERVICE

FISH AND WILDLIFE SERVICE  
WASHINGTON, D.C. 20240

MAR 10 1980

Dr. Ralph Schreiber  
Pacific Seabird Group  
900 Exposition Boulevard  
Los Angeles, California 90007

Dear Dr. Schreiber:

This letter is in response to your recent inquiry regarding implementation of the "Convention Between the Government of the United States of America and the Government of Japan for the Protection of Migratory Birds, and Birds in Danger of Extinction, and Their Environment". To date, the following actions have been taken:

1. Exchange of lists of species endangered with extinction in Japan and the United States (1974)
2. Designation of Rose Atoll (1973), and Jarvis, Howland, and Baker Islands (1975) as National Wildlife Refuges, primarily for their value to seabirds, shorebirds, and marine turtles.
3. Publication of:
 

Byrne, J. E. ed. 1979. Literature review and synthesis of information on Pacific Island ecosystem. U.S. Fish and Wildlife Service, Office of Biological Services, Washington, D.C. FWS/OBS - 79/35.
4. Exchange of technical information concerning establishment of a computerized bird banding system in Japan.
5. Placement of observers from USFWS on Japanese fishing vessels to determine mortality of seabirds from gill net fisheries (1978 and 1979).
6. Establishment, by Executive Order, of 2 National Wildlife Monuments (totalling some 11 million acres) in Alaska in 1978.
7. Establishment of 11 new National Wildlife Refuges (totalling some 36 million acres) in Alaska in 1980.
8. Request for \$553,000 in the 1981 FY Federal Budget specifically designated for marine bird research, primarily in the areas of determining distribution and abundance of these species, development of new census techniques, determining high use areas in the Northern Pacific, determining factors affecting productivity of these species, determining species' sensitivities to pollution and human disturbance, avian use of fishery resource, and location of critical staging and wintering areas.

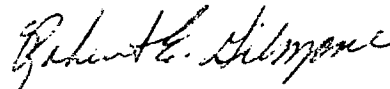


Aside from items No. 1 and 8 none of the actions listed above was initiated solely on the basis of its utility in fulfilling our treaty commitments with Japan. Nevertheless, each of these actions have contributed in that regard. This is especially true of the recent designations of the 11 new National Wildlife Refuges in Alaska, amongst which is the Alaska Marine Resources NWR comprising 460,000 acres of rocks, spires, stacks, reefs, islands, islets, and selected capes along the entire coast line of Alaska. This constitutes a prime breeding habitat acquisition for many marine species.

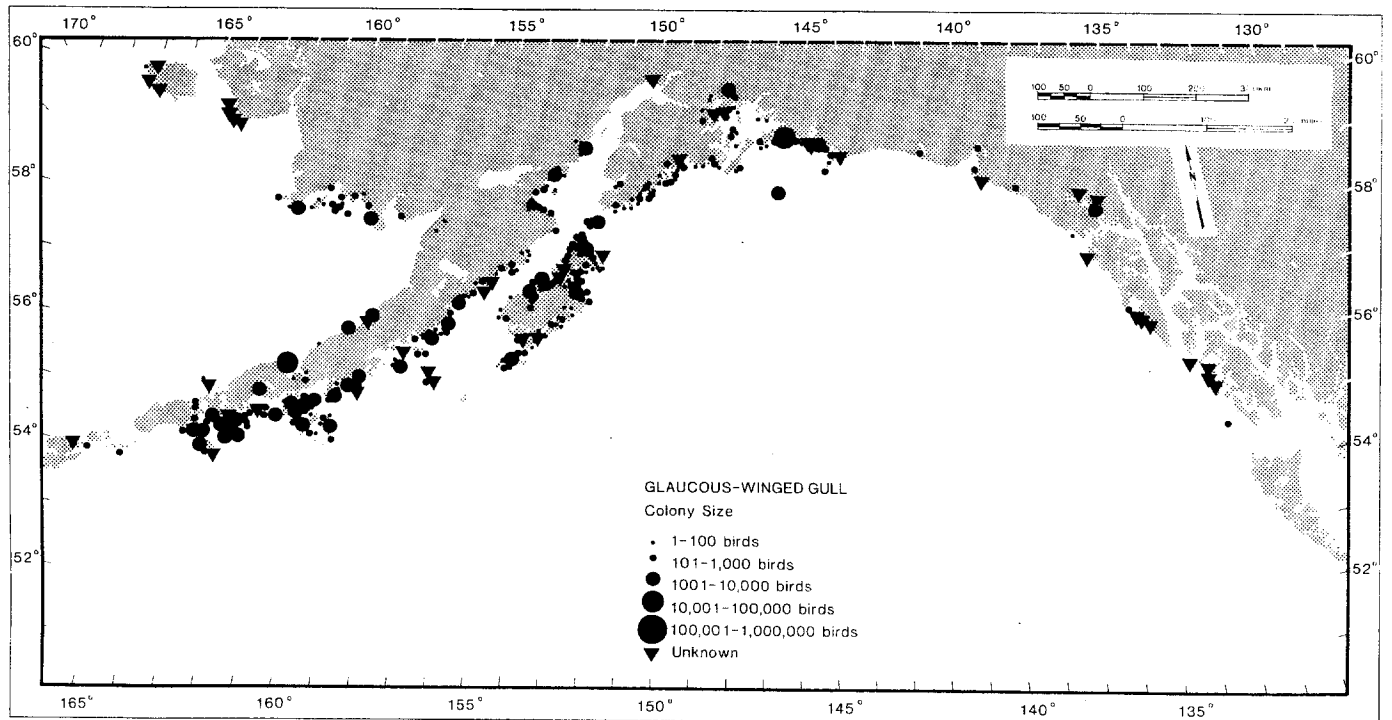
If you have further need for information please contact Associate Director-Wildlife Resources, Fish and Wildlife Service, Washington, D.C. 20240. We appreciate your offer of assistance and look forward to working with the Pacific Seabird Group on matters of mutual concern.

Thank you for your interest in our efforts to implement this important convention.

Sincerely



Acting Associate Director



7 April 1980

Mr. Jim King  
Editor  
Bulletin of the Pacific Seabird Group

Dear Jim:

This letter is in reference to the Bruce Dinneford "letter-to-the-editor" printed in the Summer 1979 issue of the Bulletin.

Mr. Dinneford apparently let his sentiments against the concept of Alaska National Interest Lands legislation color his reading of the specific points in Dan Anderson's 28 March 1979 letter to Congressman Leggett concerning offshore boundaries for new coastal National Wildlife Refuges and Parks in Alaska. Following are several comments on points where there seems to be some misunderstanding.

First, the same issue of the Bulletin (Summer 1979) that carried Anderson's letter to Congressman Leggett also reported on the official PSG resolution, approved at the January 1978 meeting, in support of the establishment of National Wildlife Refuges in Alaska, both on the coast and in interior river valleys. Thus, PSG support of these refuge units is a matter of record.

Second, as Anderson indicates, offshore boundaries are established practice on a number of units of both the National Park and Wildlife Refuge systems in Alaska and elsewhere in the United States.

Third, Anderson acknowledges that "it is impossible ... to include within a seaward boundary all the waters used by seabirds..." Nonetheless, there is ample evidence -- some of which Anderson cites -- that during those months when seabirds are using colony sites, a substantial portion of those birds are found within six miles of shore. There is no doubt that the seabirds range far beyond a six-mile limit, but the question is where can one draw a boundary that adequately protects the resource and is practical from a management standpoint!

Fourth, Mr. Dinneford is right in noting that "spilled contaminants will not adhere to such boundaries" (i.e., six-mile offshore boundary). However, there are numerous instances, including the placement of offshore oil rigs, where a refuge boundary six miles offshore might be an effective legal tool in determining whether and how developmental activities proceed.

Fifth, the authority of the State of Alaska is limited to the three-mile territorial sea, and, in fact, they only have title to the submerged lands (i.e., not the water column) in that zone.

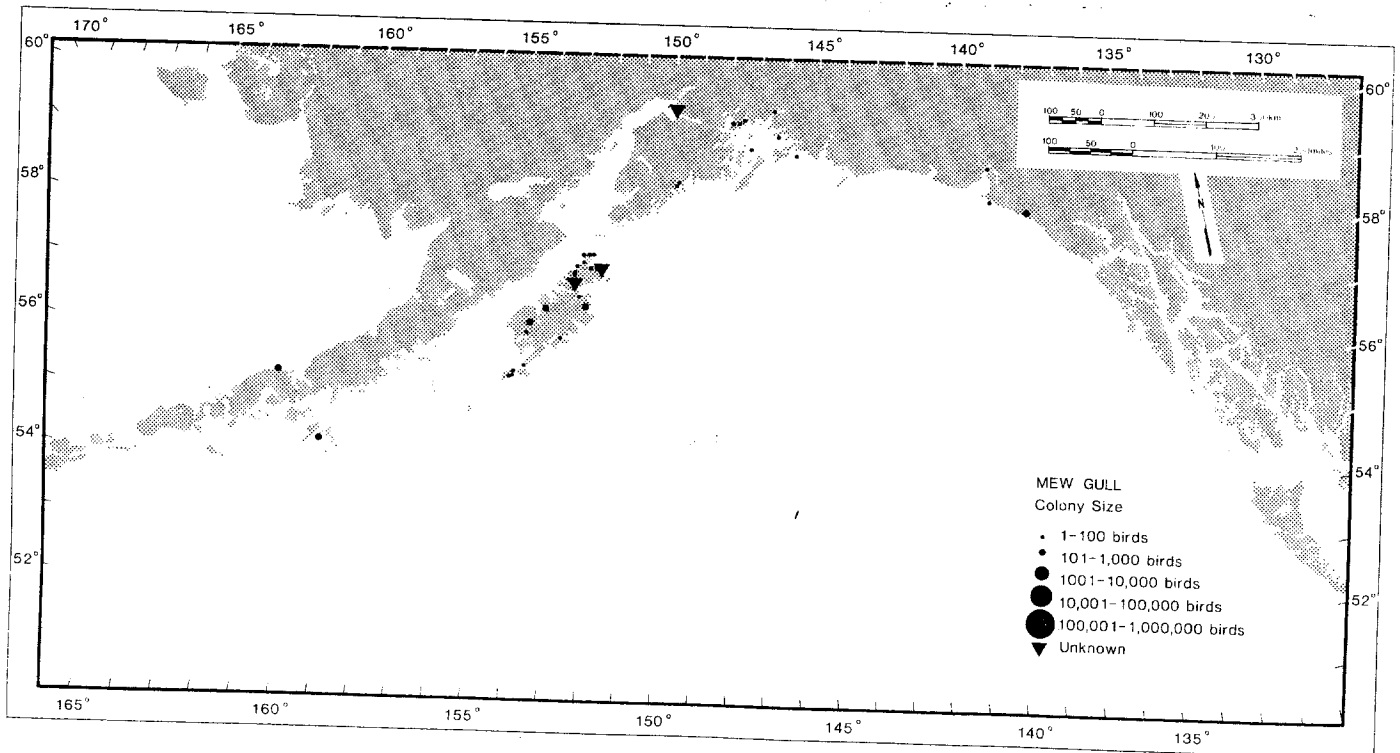
In sum, I think the rationale from both biological and management standpoints is sound, and I very much appreciated Anderson's thoughtful letter to Congressman Leggett. I hope the PSG and its individual members continue to speak out on the important conservation issues of our time.

Incidentally, PSC members will be interested to know that although the version of the Alaska lands bill which passed the House in 1978 contained language intended to protect the areas offshore of coastal parks and refuges, no such language is in the bill which passed the House in 1979 or the versions pending in the Senate in 1980. We may have to test Mr. Dinneford's belief that the Army Corps of Engineers and other agencies will protect the quality of our critical coastal habitats!

Sincerely,



Stan Senner  
612 "C" St., NE  
Washington, D. C. 20002



Reprinted with permission: From The Mitigation Symposium, A national workshop on mitigating losses of fish and wildlife, Rocky Mt. Forest and Range Exp. Stat., Forest Serv., Gen. Tech. REP. RM-65, no.59-62.

## Marine Habitat Protection: Tougher Fights Ahead<sup>1</sup>

James P. Walsh<sup>2</sup>

I welcome this opportunity to address you on the subject of protecting vital marine habitats for fish and other wildlife. We at the National Oceanic and Atmospheric Administration are concerned about marine habitats because of our responsibilities for management of marine fish of commercial and recreational importance, marine mammals and certain endangered species, such as whales and sea turtles, and because of our statutory missions to research and monitor the effects of pollution on the marine environment. In the case of fisheries, the value of habitat to our commercial and recreational fishing industries is obvious--65 percent of all domestic marine fishing value is derived from wetland dependent species. As a consequence, we have made habitat protection a matter of high priority with our agency.

As NOAA Administrator Dick Frank emphasized last fall at Congressional oversight hearings on the Fish and Wildlife Coordination Act, the "destruction and degradation of marine, estuarine, and anadromous fish habitats is now the most critical long-term fishery resource problem." Furthermore, we believe that the most significant cause of species decline and extinction in the future may well be the loss of critical habitat.

We are marshalling our research resources to understand better the importance of habitats and the threats to them with programs under title II of the Ocean Dumping Act and other statutes; we are improving our review and comment ability under the Fish and Wildlife Coordination Act (FWCA) and the National Environmental Policy Act (NEPA); and we are vigorously pressing our views on other Federal Agencies that make decisions about habitat protection. And we are striving to carry out President Carter's recent Executive Order directing extra efforts for the protection of wetlands.

Concomitantly, it is also clear that the job of protecting and conserving marine and estuarine habitat is going to get tougher. Conflicts between protection and development con-

tinue to multiply in our coastal zones, especially conflicts over the use of dwindling wetlands. Soon conflicts over vast areas -- such as over D-2 lands in Alaska -- will be things of the past. The conflicts of the future will be over hundreds, or even dozens, of acres of habitat area. As competition for scarce resources in our crowded coastal areas intensifies, the tradeoffs among land and water uses threaten to leave many legitimate uses out of the picture. Widespread distrust of government and its regulations, even the ones that have always been generally supported, further weakens our ability to mediate these conflicts in individual cases. And the sheer complexity of natural systems and our lack of knowledge about critical habitats contribute further to making the job even tougher than it has been in the past.

Today I would like to talk about how we in NOAA are attempting to carry out this difficult-- and ever more important -- responsibility to protect and conserve marine and estuarine habitats. In doing so, I will concentrate on three major areas of NOAA's activities: (1) habitat protection activities, led by the National Marine Fisheries Service; (2) coastal zone management programs, including estuarine and marine sanctuaries; and (3) our broader pollution research efforts.

### PROTECTING MARINE HABITAT: COPING WITH THE SIZE OF THE JOB

We take a broad view of habitat protection. Estuaries and near-shore waters are critical to the life cycle of many marine species. Yet we must be concerned also with the fish on the continental shelves and in our 200 mile fishery conservation zone, including the five Great Lakes. For example, many types of fish eggs go through their vulnerable early life on the surface of coastal, offshore waters. For benthic organisms the sediments are vitally important. In short, whatever the critical habitat -- wetlands, open ocean, or seafloor -- NOAA seeks better understanding of the role of the habitat in the fish or mammal life cycle, and then tries to take the necessary protective actions.

Much of our effort goes into reviewing Federal permits, environmental impact statements, projects, and other Federal actions (such

<sup>1</sup> Paper presented at the Mitigation Symposium, July 16-20, 1979, Colorado State University, Fort Collins, Colorado.

<sup>2</sup> Deputy Administrator, National Oceanic and Atmospheric Administration, Washington, D.C.

as state coastal zone management plans) that would in some way affect habitat. The National Marine Fisheries Service is NOAA's principal respondent to announcements of pending Federal actions. As an example of our workload, in 1978 the NMFS Southeast Region (one of five regions nationwide) was asked to review 6,098 applications for various Federal permits to perform work in navigable waters, 58 environmental impact statements, 97 Federal water development project plans, 1,239 permit applications for discharge of various pollutants into U.S. waters under the Environmental Protection Agency's National Pollutant Discharge Elimination Program, and 19 draft coastal zone management plans.

Unfortunately, there is a great danger of being spread too thin by trying to cover all the situations that may affect habitats. The result could be less than "A" quality work. Consequently, we must select those projects that merit close attention. The factors that we consider in making such a selection include the size of the project, the importance of the living marine resources that are involved, the potential for impact (especially impacts that may be irreversible), the ability of others to handle the situation, and the precedent-setting nature of the case.

For example, in 1978 we spent considerable effort in evaluating the risks to marine habitat associated with proposed oil refineries at Eastport, Maine, and Portsmouth, Virginia. We have pressed NOAA's opposition to these projects at the highest levels of the Environmental Protection Agency, the Corps of Engineers and the Department of the Army. NOAA also played an important role in the Chief of Engineers Interagency Task Force which was formed to evaluate U.S. East Coast refinery sites as possible alternatives to the proposed Eastport and Portsmouth sites and which identified numerous better sites than those proposed.

The National Marine Fisheries Service carries out its FWCA duties through our new Office of Habitat Protection which was established within NMFS last year to ensure that FWCA activities get prompt, high-level attention. This office has a nationwide staff of 81. In turn these individuals can draw upon the scientific expertise of 165 other fishery researchers involved in marine population and habitat studies. Additional expertise is also available in our Environmental Research Laboratories, the Sea Grant Program, and our new Office of Marine Pollution Assessment.

In light of tight ceilings on Federal budget expenditures and personnel, despite our best efforts we have been able to comment on only about 15 percent of the significant projects affecting marine habitats around the country. However, we are seeking, through alternative

approaches, to increase the amount and effectiveness of our work in protecting habitat. One approach is to contract with states and private entities for field investigations at proposed development sites. We have a pilot project in one region which we hope will allow us to review 90 percent of the significant permit applications. If successful, this approach may enable us to increase the impact, timeliness, and effectiveness of our efforts to comment on a large portion of the significant proposals to alter habitat.

The growing volume of demands on the marine and estuarine environment makes the successful adoption and implementation of strong coastal zone management programs especially critical. Such programs can provide the basis which allows state governments to avoid inimical development in fragile marine and estuarine habitats. Under the Coastal Zone Management Act and regulations, habitats of particular concern must be inventoried by the States and procedures developed for protecting or restoring their conservation and ecological value. Fourteen state programs have been approved, and six more are slated for approval in the next several months. These programs cover more than 75% of our nation's coast. As the basic state programs come into effect, NOAA is launching a number of related efforts to strengthen the protection given to coastal and marine habitats.

- o States with approved coastal zone programs are being required to devote an increasing percentage of their Federal funding to improvements in their initial programs to assure attention to four major national interests, one of which is the protection of natural areas. As a result of this approach, for example, Oregon's approved coastal management program requires mitigation for the placement of fill in tidal and intertidal estuarine marsh areas, and the Oregon Legislature has recognized the value of this approach by adopting it as State law this month.
- o Working with the President's Council on Environmental Quality, NOAA is developing map overlays that identify coastal areas that are environmentally critical (such as habitats) and least suitable as sites for energy facilities or other major developments. These overlays will display, on a common base map, information on important coastal biophysical processes, species, habitats, economic activities and commercially valuable resources, air and water quality, residential and urban development, recreation, and legal-jurisdictional data such as coastal zone management designations. Putting this information onto a single visual format will help simplify the job of decisionmakers in evaluating development sites.

- o NOAA is utilizing special task forces to address major questions such as the B Sea Outer Continental Shelf oil lease sale. We have assigned lead responsibility for preparing NOAA comments on oil and gas leasing on the Outer Continental Shelf to our Office of Coastal Zone Management. In turn, this office creates agency-wide working groups to respond to OCS leasing proposals. This approach augments the more routine efforts of the National Marine Fisheries Service and other NOAA elements.
- o NOAA is experimenting with an effort in Grays Harbor, Washington, in conjunction with the State of Washington Coastal Zone Management program, to channel and control development in advance rather than fight it once it has been proposed. The goal of this special State-Federal effort, which is still being developed, is a comprehensive plan that will set forth all land and water uses (protection, conservation, or development) for the 100 mile Grays Harbor estuary for the next several decades. We are watching this experiment closely to see if it will be a success or should be tried elsewhere.

These supplemental efforts reflect the enormous strain we are under as a result of the traditional permit-by-permit, case-by-case approach to habitat protection. Unless we develop a better way and a broader perspective for addressing habitat protection, losses may occur simply because we did not have enough people and resources to deal with the crush of individual permits that now must be reviewed.

#### CURRENT ISSUES IN NOAA PROGRAMS

NOAA has a broad range of legal authorities which are the basis of our on-going programs. I would like to briefly mention some issues relating to our programs and legal authorities.

##### Fish and Wildlife Coordination Act Activities

The Fish and Wildlife Coordination Act is the basis for many of our habitat protection efforts. It is a sound statute which is critical to the entire national programs. Just recently, NOAA and the Fish and Wildlife Service issued joint regulations improving our implementation of the Act. We have identified two other problems in FWCA implementation that NOAA can attempt to remedy administratively. These are in the areas of follow-up and public awareness.

First, let me discuss the follow-up issue. NOAA routinely recommends that mitigation and enhancement measures be incorporated into construction projects. However, these recommendations are not routinely implemented, and, if they would require a change in the project or

an increase in cost, these mitigation measures are often strongly resisted. Few construction or regulatory agencies have formal policies, procedures, or regulations which require them to account for the recommendations made by fish and wildlife agencies. The recommendations do not have to be incorporated as permit stipulations and, as far as we can determine, regulatory agencies do not follow-up to see that FWCA recommendations actively result in the desired implementation of mitigation measures.

To get at this problem, NOAA plans a pilot follow-up project this year in the Northeast. Detailed project plans have not been completed, but we expect to determine whether our FWCA recommendations were made part of permit or project stipulations, whether they were actually carried out as recommended, and whether these recommendations did in fact mitigate damage to habitats. Furthermore, we expect such follow-up studies to improve future recommendations and to guide us in allocating our program resources to those activities that are most effective for protecting fish habitat.

The second problem is a lack of awareness by the public about FWCA actions we propose to take. During hearings on the proposed FWCA amendments last year, NOAA was asked if a system existed for making FWCA recommendations and supporting research results known to the public. We had to admit that there was none. The information, of course, is public and we usually have an extensive network of informal discussions and consultations with particular groups. But no formal mechanism exists for notifying the general public that we have a concern, have taken a position, or have recommended certain mitigating measures for a particular project. Yet there is no reason why we cannot do this. We are now attempting to be more diligent in notifying the public on the actions we have taken and the reasons for them. Adequate public interest and involvement will definitely increase the chances that our recommendations will be implemented.

##### The Estuarine and Marine Sanctuary Programs

Two other major national programs, which NOAA administers, can also benefit habitat protection goals. These programs allow coastal States or the Federal government to acquire and manage areas of ecological importance, including important habitats. Our first estuarine sanctuary in Coos Bay, Oregon, contains 4,000 acres in South Slough Bay. It provides the State with a natural field laboratory and protects an important estuary. Five estuarine sanctuaries have been established and we are working on the next two. Two marine sanctuaries are now in place and several others are under active consideration.

In some cases, a sanctuary can accommodate other uses as long as they are consistent with the primary uses of the sanctuary. Such may be the case with the proposed Flower Garden Banks Sanctuary off the Louisiana-Texas coast where the proponents of the sanctuary would like to protect a unique coral population within an area undergoing oil and gas drilling operations. Multiple use is also an issue in the Georges Bank area. The Georges Bank, which is off the Massachusetts coast -- a 20,000 square mile area-- has been nominated by a group of environmentalists and commercial fishermen for protective status as a sanctuary. The area is important as a source of fish and a number of endangered species of whales migrate through these waters. This area is also believed to contain oil and gas reserves that are becoming increasingly vital. A lease sale of oil and gas tracts on Georges Bank is scheduled to be held this fall. We are now collecting data in order to make the decision on a possible sanctuary on Georges Bank.

#### NOAA's POLLUTION RESEARCH: OMINOUS RESULTS FOR HABITATS

I would like to conclude my discussion by summarizing some results of our pollution research. These conclusions evidence serious problems for the animals we are trying to protect. Pollutants are in additional, insidious threat to wildlife habitat.

Congress has directed NOAA to research the effects of pollution on the marine environment in several statutes, including title II of the Marine Protection, Research and Sanctuaries Act. We also have an important government-wide coordinating and research role under the National Ocean Pollution Research and Development and Monitoring Planning Act.

Some dramatic research results have come from NOAA's Tiburon, California, fisheries laboratory where Dr. Jeannette Whipple has conducted a pioneering series of in-depth studies on adult striped bass. Dr. Whipple's findings provide possibly the first documentation of long-term chronic effects of pollutants such as heavy metals, PCBs and other chlorinated hydrocarbons on mature fish. Dr. Whipple has concluded that the pollutants in the San Francisco Bay estuary are weakening the fish and making them more susceptible to parasites and disease. These results have spurred the California State Water Resources Control Board to schedule fact-finding hearings on the problem next month.

In another precedent-setting work, one of our geneticists, Dr. Arlene Longwell at the Milford, Connecticut, NMFS laboratory, has achieved what is believed to be the first measurement of sublethal pollutant effects on fish eggs in the field. Dr. Longwell's data indicate that

spawned Atlantic mackerel eggs are being adversely impacted by hydrocarbon and heavy metal pollution in a portion of their major spawning grounds in the stressed New York Bight. Her work shows that these pollutants can inhibit normal growth and development of mackerel eggs.

In the heavily stressed New York Bight, much of the work at our Northeast Fishery Center has been useful in drawing cause and effect relationships between various pollutants and incidence of diseases in fish. For Example, research and monitoring activities have shown a high incidence of black gill and exoskeleton erosion in shrimp, crabs and lobsters in natural areas polluted by organic wastes, chemical contaminants, or copper. In the laboratory, similar species are being exposed to similarly contaminated sediments and the same disease syndrome is appearing, leading us to believe that these symptoms can be related to the degree of pollution.

At the Great Lakes Environmental Laboratory in Ann Arbor, Michigan, scientists working on the phosphorus problem have studied the mechanisms for recycling pollutants in the ecosystem. These scientists have learned that pollution recycling in the Great Lakes ecosystem is a very complex process and a full understanding of all physical chemical and biological components must be available before predictions as to the future of the ecosystem can be made. We have learned that it is not enough merely to stop putting certain pollutants into the environment and then expect the problems to go away. Interactions in the marine and Great Lakes ecosystems are extremely complex and will require our continued research in order to properly determine our future course in the area of habitat protection. As I said before, habitat protection is going to get tougher.

#### SUMMARY

The wildlife and fishery resources of this nation are the trust responsibility of State and Federal governments. Certain Federal statutes spell out the manner in which our trustee responsibility is carried out. Common property resources require our efforts to ensure their continued availability for posterity.

Yet our efforts to ensure that habitats are not irretrievably lost will become more arduous in the future because of complexity, competition for scarce space in the coastal zone, pollution problems, and, unfortunately, a fair amount of public indifference and distrust of government intentions.

I hope all of you remain committed to the effort; we at NOAA are deeply so.

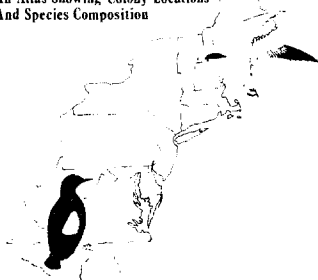
## NEW PUBLICATIONS

The Editor welcomes notices, abstracts, and short reviews of publications of interest to seabird biologists. Especially desired are notices and sources of supply of publications of limited distribution which might not otherwise come to the attention of those who could use them.

### Coastal waterbird colonies

Biological Services Program  
FWS/OBS-79/8  
November 1979

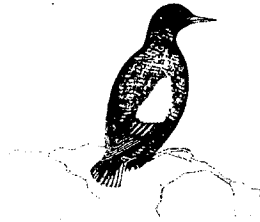
**Coastal Waterbird Colonies:  
MAINE TO VIRGINIA, 1977  
An Atlas Showing Colony Locations  
And Species Composition**



Fish and Wildlife Service  
U.S. Department of the Interior

Biological Services Program  
FWS/OBS-79/9  
November 1979

**Coastal Waterbird Colonies:  
MAINE**



Fish and Wildlife Service  
U.S. Department of the Interior

Biological Services Program  
FWS/OBS-79/10  
November 1979

**Coastal Waterbird Colonies:  
CAPE ELIZABETH, MAINE TO VIRGINIA**



Fish and Wildlife Service  
U.S. Department of the Interior

Reports of the findings of a 1977 survey of seabird and wading bird nesting colonies along the coast from Maine to Virginia. The volumes are: FWS/OBS 79/08, Maine to Virginia, 1977, An atlas showing colony locations and species compositions; FWS/OBS 79/09, Maine; and FWS/OBS 79/10, Cape Elizabeth, Maine to Virginia. The first volume gives maps and basic data for all the colonies. The second and third volumes summarize and discuss the significance of the colony data. Copies are available from either:

Information Transfer Specialist  
U.S. Fish and Wildlife Service  
Suite 700  
One Gateway Center  
Newton Corner, MA 02158

or Information Transfer Specialist  
U.S. Fish and Wildlife Service  
NASA-Slidell Computer Complex  
1010 Gause Blvd.  
Slidell, LA 70458

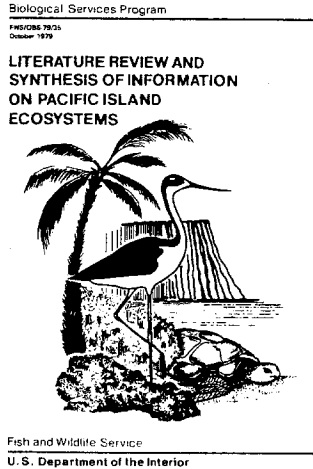


## Beached bird manual



Written and illustrated by the Point Reyes Bird Observatory Staff for the U.S. Fish and Wildlife Service, this manual is designed to help beached bird censusers on the North American west coast (Alaska to Baja California) identify marine bird (and mammal) carcasses in all states of disintegration. Bird banders will also find the keys useful. Besides identification keys there are instructions on conducting beached bird censuses, procedures to follow after an oil spill, a glossary, and species accounts. Copies may be obtained from: U.S. Fish and Wildlife Service (OBS), Lloyd 500 Bldg., Suite 1692, 500 N.E. Multnomah St., Portland, OR 97232.

## Pacific islands information system



The U.S. Fish and Wildlife Service has developed a computerized data base of over 20,000 references on biological, ecological, physical, chemical, and socioeconomic information on the Hawaiian Islands, American Somao, Guam, the Northern Marianas Islands, and the Trust Territories of the Pacific. Information on access to the data base may be obtained from the Portland U.S. Fish and Wildlife Office. A Literature Review and synthesis of information on Pacific island ecosystems (FWS/OBS 79/35) has also been published and may also be obtained from the Portland or Slidell U.S. Fish and Wildlife Service offices.

### Catalog of Alaskan seabird colonies

An atlas of Alaskan seabird colonies has been published by the U.S. Fish and Wildlife Service in its OBS series (FWS/OBS 78/78). Copies may still be available from: Alaska Area Office, U.S. Fish and Wildlife Service, 1011 E. Tudor Rd., Anchorage, AK 99503.

### Atlantic Coast heron colonies

The U.S. Fish and Wildlife Service has published: Herons and their allies: Atlas of Atlantic coast colonies, 1975 and 1976 (FWS/OBS 77/08). Copies may still be available from the Slidell office.

### Gulf Coast colonies

Another U.S. Fish and Wildlife Service publication: Nesting colonies of seabirds and wading birds: Coastal Louisiana, Mississippi, and Alabama (FWS/OBS 77/07). May still be available from the Slidell Office.

### Protection and management of colonial nesting waterbirds

A publication entitled: Guidelines for the protection and management of colonial nesting waterbirds may still be available from P. A. Buckley, North Atlantic Regional Office, National Park Service, 15 State St., Boston MA 02109.

### Washington marine birds

A baseline survey of significant marine birds in Washington State may be obtained from: K. R. McAllister, Nongame Program, Washington Game Dept., 500 N. Capitol Way, Olympia, WA 98504.

### U.S. Army Corps of Engineers publications

The Dredged Material Research Program of the U.S. Army Corps of Engineers has sponsored and published research on marine birds. Their publications may be obtained from: U.S. Army Engineer Waterways Experimental Station, ATTN: Ms. D. P. Booth, P.O. Box 631, Vicksburg, MI 39108. The following may still be available:

Tech. Rep. D-78-1. Use of dredged material islands by colonial seabirds and wading birds in New Jersey.

Tech. Rep. D-78-13. An aerial survey of waterbird colonies along the upper Mississippi River and their relationship to dredged material deposits.

Tech. Rep. D-78-17. Colonial nesting sea and wading bird use of estuarine islands in the Pacific Northwest.

Tech. Rep. D-78-18. Development and management of avian habitat on dredged material islands.

### Alaskan seabird portraits

Wildlife Portrait Series no. 4, A host of seabirds-Alaska, painted by Bob Hines, has been released by the U.S. Fish and Wildlife Service. The series is available from the Superintendent of Documents, Government Printing Office, Washington, D.C. (stock no. 024-010-00530-1) for \$5.00.

### Farallones avifauna

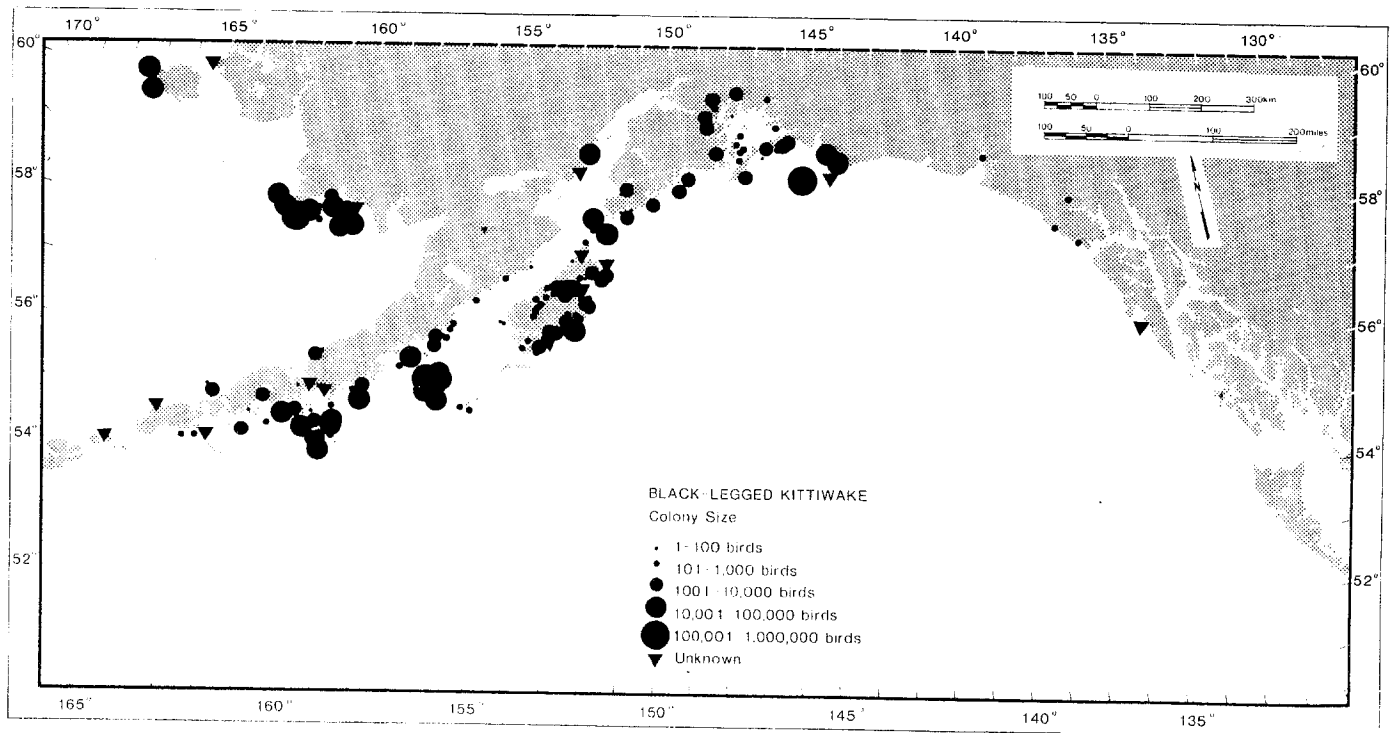
The avifauna of the South Farallon Islands, California, by Dave DeSante and David Ainley, Studies in Avian Biology No. 4, has been published by the Cooper Ornithological Society. Details of the results of the first eight years work by the staff of the Point Reyes Bird Observatory is presented along with a discussion of all visitant and breeding birds. An important publication for PSG members. Copies may be obtained from: Allen Press, Inc., P.O. Box 368, Lawrence, KS 66044. A check for \$10.00 made out to the Cooper Ornithological Society must be enclosed.

Census methods for murre

Census methods for murre, Uria species: A unified approach, by T. R. Birkhead and D. N. Nettleship has been published as Canadian Wildlife Service Occas. Paper No. 43. Methods are presented for estimating population size and status for murre at four colony types. The geographic location of study colonies, frequency of counts and potential sources of errors are discussed. Available from: Dr. D. N. Nettleship, C.W.S., Bedford Inst. of Oceanography, P. O. Box 1006, Dartmouth, N.S. B2Y RA2, Canada.

Brown Pelican bibliography

Ralph and Betty Anne have managed to find 900 (!) citations in which Pelecanus occidentalis is mentioned. The few PSG members interested in such a publication may obtain it from: R. W. Schreiber, Natural History Museum, 900 Exposition Blvd., Los Angeles, CA 90007. A check for \$3.00 must accompany the order.



## BULLETIN BOARD

### The Charles Darwin Foundation

The Charles Darwin Foundation for the Galapagos Islands maintains a research facility on Isla Santa Cruz, Galapagos. Dr. David Duffy is the Director. The station is very interested in obtaining reprints of articles of all seabirds for their library. Because of the isolation and difficulty of communication with the rest of the world, members of the PSG are asked to send complete sets of their published studies to Dr. David Duffy, Estacion Biologica Charles Darwin, Casilla 58-39, Guayaquil, Ecuador, S.A. Please send them airmail.

### Save Protection Island: Adopt a Seabird

The Admiralty Audubon Society is trying to prevent the disturbance and destruction of the birds and other wildlife of Protection Island from development. The island, which lies a few miles west of Port Townsend, supports the largest breeding colony of Glaucous-winged Gulls in Washington, 17,000 pairs of Rhinoceros Auklets, and the largest colony of Tufted Puffins in Puget Sounds. It is also a major breeding area for Pelagic Cormorants, Black Oystercatchers, and Pigeon Guillemots, as well as being an important pupping and loafing area for harbor seals. The Zella M. Schultz Seabird Sanctuary occupies one-fifth of the island. Increased human activity on the island now poses an immediate threat to nesting Bald Eagles and all ground-nesting birds.

The Society is raising funds through its Adopt a Seabird program to purchase land for a wildlife preserve and is trying to have the island included in the National Wildlife Refuge System. Donations or requests for information should be sent to: Eleanor Stopps, Chairman, Save Protection Island Committee, Route 1, Box 525B, Port Ludlow, WA 98365.

### Birdwatcher's House Exchange Directory

An unspecified group plans to produce a directory of birdwatchers interested in exchanging houses or apartments for vacations or "hospitality." If you are interested in learning more about this project, send a self-addressed envelope to: Max Lazar, 55 Grand Ave., Rockville Center, NY 11570.

NEW MEMBERS

Charlie Chase III  
Denver Museum of Natural History  
City Park  
Denver, CO 80205

Curatorial assistant  
Studies: Literature review of foraging efficiency of N. Pacific seabirds.  
Interests; Foraging efficiency and life history and zoogeography of immature shearwaters and albatrosses.

Donald A. Croll  
Oregon Institute of Marine Biology  
Charleston, OR 97420

Graduate student  
Studies: Breeding and feeding biology of Common Murre.  
Interests: Feeding biology of seabirds.

Brooks B. Dollar  
1335 N. Tielman Ave.  
Fresno, CA 93728

Postal clerk  
Interests: Drawing, painting, and sculpture of seabirds.

Elizabeth D. Rockwell  
School of Natural Resources  
The Univ. of Michigan  
Ann Arbor, MI 48109

Graduate student  
Studies: Food robbing in Glaucous-winged Gull.  
Interests: Conservation, behavior, and "everything else."

Eric J. Taylor  
Alaska Cooperative Wildlife Research  
Room 209, Irving Bldg.  
Univ. of Alaska  
Fairbanks, AK 99701

Graduate student  
Studies: Feeding ecology of molting Oldsquaw.  
Interests: Food habitats of seabirds and community ecology and migration of seabirds.

Bernice M. Wenzel  
Dept. of Physiology  
UCLA School of Medicine  
Los Angeles, CA 90024

Professor  
Studies: Olfaction of Procellariiformes  
Interests: Structure and function of olfactory systems.

COMMITTEE COORDINATORS

Seabird sanctuaries:

Palmer Sekora  
U.S. Fish and Wildlife Service  
Finley National Wildlife Refuge  
Route 2, Box 208  
Corvallis, Oregon 97330

Human disturbances to seabirds:

Paul R. Kelly  
California Department of Fish and Game  
Wildlife Management Branch  
350 Golden Shore  
Long Beach, California 90802

Coastal surveys:

Robert E. Gill, Jr.  
U.S. Fish and Wildlife Service  
1011 East Tudor Road  
Anchorage, Alaska 99503

Publications:

Daniel W. Anderson  
Division Wildlife and Fisheries  
University of California  
Davis, California 95616

Seabird/fishiers interaction:

George L. Hunt, Jr.  
School of Biological Sciences  
University of California  
Irvine, California 92664

Foreign translations:

Douglas Siegel-Causey  
Department of Ecology  
University of Arizona  
Tucson, Arizona 81721

THE OTHER SEABIRD GROUPS

The Seabird Group. Honorable Secretary,  
Dr. T.R. Birhead, Dept. of Zoology  
University of Sheffield. Sheffield S10 2TN  
England.

The Australasian Seabird Group  
P.O. Box 65, Civic Square, ACT 2608  
Canberra, Australia

P.O. Box 12397, Wellington North  
New Zealand

The Southern African Seabird Group  
c/o Percy Fitzpatrick Institute of African Ornithology  
Univeristy of Capetown  
Rodebosch 7700  
South Africa



