

The Hooded Pitohui's Poisonous Secret · Birders of Winter ·
Chronicle of a Year on Long Island · Murphy's Petrels on Ducie Atoll: Another Piece of the Puzzle

American Birds

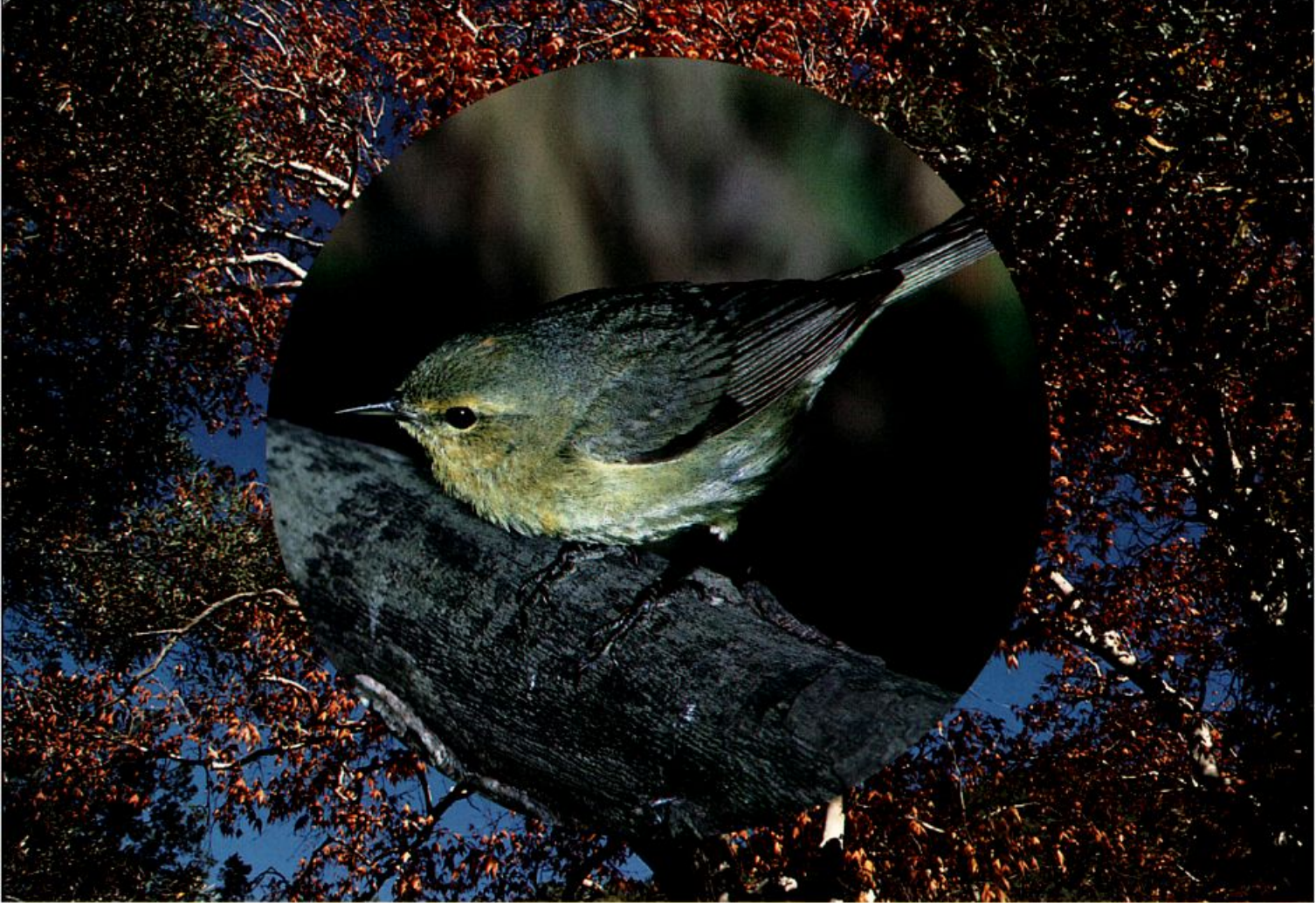
THE MAGAZINE OF RECORD AND DISCOVERY · WINTER 1992



THE HOODED PITOHI IN NEW GUINEA, p. 1084

NATIONAL AUDUBON SOCIETY





Greg Horn

Orange-crowned or Tennessee Warbler?

You are viewing *Vermivora celata*, different in only the most subtle details from *V. peregrina*, the Tennessee Warbler. To make this fine distinction, serious birders have depended on BAUSCH & LOMB® for 139 years. They know that innovative design, superior components and unsurpassed craftsmanship differentiate Bausch & Lomb binoculars and spotting scopes from all others.

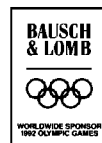
The Elite® is the standard by which all birding binoculars are measured. Now the best is even better. New PC-3 Phase Correction coating provides an incredible 30% increase in resolution and clarity. Durable construction with rubber armoring withstands the most rigorous field conditions. And, because of the Elite binocular's comfortable, long eye relief, even

eyeglass wearers can enjoy extended viewing of their favorite species. Elite binoculars are available in 8x42, 10x42, and new 7x36 configurations.

The Elite™ spotting scopes establish the benchmark for birding scopes. The new Elite Zoom 77mm with ED-Prime low dispersion glass delivers dramatically enhanced color and resolution quality. The Elite 15-45x Compact Zoom spotting scope with PC-3 Phase Correction coating sets the standard for compacts.

The Custom® Series binocular was designed in consultation with internationally renowned ornithologists. Endorsed by the National Audubon Society, Custom® is America's favorite birding binocular, in 10x40 and 8x36 standard, and 7x26 compact configurations.

If you're serious about birding, ask your photo or sporting goods dealer for Bausch & Lomb® First in the Field of Vision



BAUSCH & LOMB

NATIONAL AUDUBON SOCIETY

Officers

HAROLD E. WOODSUM JR.
Chairman of the Board

PETER A.A. BERLE
President

MARIAN S. HEISKELL
BAYARD D. REA
Vice-Chairmen

MARSHAL T. CASE
JAMES A. CUNNINGHAM
SUSAN PARKER MARTIN
ASA ORSINO

CHRISTOPHER N. PALMER
ELIZABETH RAISBECK
MICHAEL W. ROBBINS
Senior Vice-Presidents

JAN BEYEA
MARY JOY BRETTON
GRAHAM L. COX
SUSAN RONEY DRENNAN
FRANK M. DUNSTAN
M. BROCK EVANS
CAROLE MCNAMARA
VICTORIA SHAW
ALEXANDER SPRUNT IV
BROOKS YEAGER
Vice-Presidents

ROBERT F. SCHUMANN
Secretary

SAMUEL A. PLUM
Treasurer

ROGER TORY PETERSON
Special Consultant

RUSSELL W. PETERSON
ELVIS J. STAHR
Presidents Emeriti

PATRICIA M. BARRETT-WALTERS

JAMES G. HANES III
SCOTT W. REED
JOHN C. WHITAKER
BARBARA WIGHTMAN
Assistant Secretaries

Board of Directors

HELEN C. ALEXANDER
LEIGH J. ALTADONNA
JOHN B. BEINECKE
JOHN C. BIERWIRTH
JACQUELINE A. BROWNE
HARRIET S. BULLITT
JANICE E. BURCH
DAVID C. CARSON
DOUGLAS M. COSTLE
NOEL LEE DUNN
PAUL R. EHRLICH
GEORGE ELLMAN
CHARLES G. EVANS
JAMES G. HANES III
MARIAN S. HEISKELL
MADELEINE M. KUNIN
PATRICIA B. MANIGAULT

JAN MARSH
ARSENIO MILLAN
J.P. MYERS
DONAL C. O'BRIEN JR.
SAMUEL A. PLUM
BAYARD D. REA
SCOTT W. REED
WILLIAM RILEY
PHILLIP B. ROONEY
WILLIAM D. ROSS
RUTH O. RUSSELL
LEAH G. SCHAD

ROBERT F. SCHUMANN
TRUMAN T. SEMANS
ROBERT H. SOCOLOW
PETER D. STENT
ALAN N. WEEDEN

JOHN CARROLL WHITAKER
HAROLD E. WOODSUM JR.

National Audubon Society Productions

CHRISTOPHER N. PALMER
President

American Birds

The Magazine of Record and Discovery

FROM THE PRESIDENT

SAVING ENERGY SAVES birds. It's that simple. For every office building and home that conserves electricity, there is less reason to build a new hydroelectric plant, like the one proposed near James Bay in Quebec that would sell power to the Northeast. For every heating system that is more efficient, there is less reason for drilling new oil wells in the fragile tundra of Alaska or off our bird-rich coastlines. That means millions of waterfowl and shorebirds will continue to find food and nesting habitat during migration and breeding seasons. Destroying habitat to waste energy that costs too much does not make sense.

That's why we are so proud of Audubon's new home. When the National Audubon Society moved into its new headquarters in Manhattan's Greenwich Village in November, it moved into a building that conserves energy, reduces air pollution, recycles most of its waste, and provides our staff with a healthy working environment. At the same time, it saves money. We have proved that sound design and inno-

vative materials can make a difference.

And that's good news for birds. The loss of habitat and pollution of breeding, feeding and resting grounds has had a drastic effect on birds in our hemisphere. Destruction of migratory stopover sites, for examples, has impacted populations of shorebirds such as Sanderlings.

When you cut energy use by half, as we are doing in our new building, that leaves a lot left over for future growth. Office buildings currently account for 13 percent of all energy use in this country. We can no longer follow a dirty, inefficient, and destructive energy policy that tries to meet the nation's needs by simply searching for more fossil fuels.

Yes, we are bragging a bit. But we consider our headquarters a prime example of what *can* be done by nonprofits, government and businesses throughout the country.

And, yes, we believe our building has relevance to what is happening at the national level. As the Clinton Administration begins to craft its stand on the environment, we hope to see an integrated energy policy. One that focuses on renewable energy sources that have less impact on the natural environment. One that saves habitat. And thus saves birds.

There is a great challenge ahead for the new Secretary of Energy, Hazel R. O'Leary. She is a bright and capable person, who must bring together a staff with a broad vision. The Department of Energy cannot be consumed with the job of cleaning up defunct nuclear weapons plants. We hope that President Clinton gives her a much larger mandate: to put together an energy policy for the future that ties together conservation, imaginative job creation, and solid environmental progress.

In other words, a mandate that will, in the end, save birds. We don't always get such a clear-cut chance to do something for warblers and cranes and ducks and hawks. Audubon's new headquarters can show the way. Let's encourage the Clinton Administration to seize this opportunity!

Robert A.A. Berle



LEICA



Seen through the brilliant eyes of Leica binoculars, an image is as real as the bird itself. Birds you've seen a hundred times come alive as never before and rarely-viewed species are accurately distinguished. Field marks stand out, feather edges are sharply defined, colors are clean, true and dependable, especially at dawn or dusk.

Leica binoculars are enticingly perfect to the smallest details. The new generation full size "ULTRA" series is close focused, waterproof and ingeniously designed. Leica compacts are powerful and versatile complements to our larger models, with all the essential quality characteristics less the size and weight. Lifetime warranty and exclusive 3 year "No-Fault" Passport Protection Plan.

Distinguish the difference Leica binoculars make!



POPULAR SCIENCE Grand Prize Winner
"Best Of What's New" In Science & Technology

Leica
THE FREEDOM TO SEE

FOR INFORMATION OR FULL COLOR BROCHURES, CALL (800) 222-0118 • IN NJ (201) 767-7500 • IN CANADA (416) 940-9262



CONTENTS



Winter grebes, p.1187

COLUMNS & DEPARTMENTS

FROM THE EDITOR 1067

AMERICAN BIRDS' WINTER GUIDE 1068

It's a great season for unusual visitors from both the north and south. A map of some of the best places to find birds this time of year.

OVERVIEW 1072

A new species in South America. Six captive-bred California Condors released. Alger Hiss on nearly 80 decades of birdwatching, and more.

BIRDING FOR FUN 1078

Plants and pollinators are coevolving, and so are hosts and parasites, predators and prey. *Paul Ehrlich* explains how the intriguing story of the Hooded Pitohui is an interesting new example of coevolution.

FACTS, INFERENCES, AND SHAMELESS SPECULATIONS 1082

J.P. Myers looks at recent research on bird migration and evolution, and reminds us that science can sometimes be blindsided if it ignores the host of chemicals that humans are spreading throughout the world's ecosystem.



Carolina Wren, p.1096

MOMENTS IN HISTORY 1184

The Chippewas called the bird "berry-breaker," but the Evening Grosbeak's common name came from misconceptions by early U.S. naturalists. *John Farrand, Jr.*

THE PRACTICED EYE 1187

Winter grebes can be hard to differentiate. Better read *Kenn Kaufman's* guide on how to tell an Eared from a Horned grebe when they are in basic plumage.



Christmas Bird Count, p.1090

AMERICAN BIRDING 1191

Pete Dunne's trip to the Salton Sea in the heat of summer raises an interesting question: Is there a difference between a birder and a fool?

PICTORIAL HIGHLIGHTS SUMMER 1992 1194

THAT'S BIRD & WORD ENTERTAINMENT 1198

MARKETPLACE 1183

FEATURES

THE HOODED PITOHIU'S POISONOUS SECRET 1184

In the New Guinea rainforest, researchers discover a bird whose feathers and skin carry the same toxin as the poison-dart frogs in South America. Now scientists have years of puzzles to unravel. *By Christopher Hallowell.*

BIRDERS OF WINTER 1090

More than 40,000 volunteers around the globe scour cities, suburbs, and wilderness to census birds during the annual Christmas Bird Count. Why do they do it? *By Elizabeth Pennisi.*

CHRONICLE OF A YEAR ON LONG ISLAND 1096

Naturalist and painter *Dennis Puleston* wrote a journal describing the birds and animals on his beloved Long Island, a gift to his grandchildren and friends. He decided to share it with a wider audience.

SCIENCE

MURPHY'S PETRELS ON DUCIE ATOLL: ANOTHER PIECE OF THE PUZZLE 1100

By Kevin Zimmer

DIE-OFF OF BROWN PELICANS IN PUERTO RICO AND THE U.S. VIRGIN ISLANDS 1106

By Ernest H. Williams, Jr., Lucy Bunkley-Williams and Iván López-Irizarry

THE CHANGING SEASONS: SUMMER 1992 1109

By Scott Terrill, Kenneth P. Able and Michael A. Patten

HOW TO READ THE REGIONAL REPORTS 1112

THE REGIONAL REPORTS: THE SUMMER 1992 SEASON 1113

Front Cover: The Hooded Pitohui's brilliant colors may be a tip-off to its danger to predators. Photograph by William Peckover/WIREO.

Never miss another O.
If you've got the soul of a photographer, we've got
the camera—the revolutionary Olympus IS-I.

Its unique Zoom **O** Lens Reflex (ZLR) system

new orleans

can power mood you from 35mm

to 135mm in soul just 1.2 seconds.

IS-I has auto-olympus

everything: fuzzy logic auto-exposure, macro

capability, red-eye reduction flash, plus the ability

for full creative control. All this in a compact camera

that has one of the most advanced lenses ever with

ED glass for sharper, brighter photos. The IS-I. It



could change your mind about changing lenses.

OLYMPUS

© 1992 Olympus Corp. For literature or dealer information, in USA call 800-221-3000 or write Olympus Corporation, Dept. 129, Woodbury, NY 11797. In Canada: Carlson Group, Inc., Toronto.



American Birds is published by
NATIONAL AUDUBON SOCIETY
Winter 1992
Volume 46, No. 5

SUSAN RONEY DRENNAN
Editor-in-Chief
Vice President for
Science Information

VICTORIA IRWIN
Managing Editor

KENN KAUFMAN
Associate Editor

GEOFFREY S. LE BARON
Christmas Bird
Count Editor

JEAN DOBBINS
Administrative Assistant

JONATHAN B. FOSTER
Associate Art Director

HEIDI DEVOS
Production Manager

NICOLE GREGORY
Regional Reports Copy Editor

MERCEDES LEE, LISA MEYER
Researchers



PETER A. A. BERLE
Publisher

HARRY C. LEGATES JR.
Publications Business Manager

JOHN B. GOURLAY
Advertising Director

SUZANNE SILFEN SCHEIN
Optics Advertising Manager

Advisors

Carl E. Bock
 Mary H. Clench
 John Farrand, Jr.
 Frank B. Gill
 Thomas R. Howell
 Frances C. James
 Kenneth C. Parkes
 Roger Tory Peterson
 Olin Sewall Pettingill, Jr.
 James V. Remsen
 Joseph R. Siphron
 Alexander Sprunt, IV
 Glen E. Woolfenden

American Birds is published five times a year. Editorial and business offices are located at 700 Broadway, New York, NY 10003 (212)979-3000. Subscription, all in U.S. \$: One year \$30.00, Two years \$50.00, Canada and Foreign \$37.00, Libraries and Institutions \$35.00. Single copies: Christmas Bird Count Issue \$15.00, Spring Issue (Autumn Migration), Summer Issue (Winter Season), Fall Issue (Spring Migration), Winter Issue (Nesting Season) all \$5.00 each. Checks and money orders in U.S. \$ only should be made payable to **American Birds**. Second class postage paid at New York, NY and additional Post Offices. Copyright 1992 by The National Audubon Society. Postmaster: Send address changes to **American Birds**, 700 Broadway, NY, NY 10003. ISSN 0004-7686.

FROM THE EDITOR

THE BUSINESS OF DISCOVERY
 It is pretty heady, and putting a personal imprint on the world of science has forever been the stuff of dreams.

The high points, the moments of new experience, revelation, insight; these are the events and images that fill the room in the corner of the mind. The process of ornithological discovery is fragmented, detailed, specialized, and topical, but that makes the act itself no less exciting. In fact, substantive new discoveries are being made all the time. They involve a great many complex matters, and, like any healthy growing adolescent, every discovery learns from the mistakes and omissions of previous discoveries.

Imagine the thrill and excitement Jack Dumbacher felt when he discovered the remarkable secret of the toxic defense mechanism of the Hooded Pitohui. I know you'll find Christopher Hallowell's account of the revelation fascinating. And be sure to read Paul Ehrlich's lucid column on avian coevolution, which puts the pitohui discovery in a broad biological framework.

Then consider Elizabeth Pennisi's article on the people behind what can only be thought of as the Superbowl of birding. Audubon's Christmas Bird Count represents the most extensive, longest-term, continuous, and most geographically comprehensive data set in American ornithology. There is no other branch of field zoology which has any sample comparable in size, scope, and regularity. It is the single

most popular, voluntary, early winter bird continental inventory in the world. It provides the empirical basis for an increasing number of research studies for those interested in winter population trends, winter range extensions, and winter bird distribution. Count statistics have been published annually for the past 92 years. What started out as several small, uncoordinated parties of birders fan-

ning out over the countryside, has become an event orchestrated with the precision of a military campaign.

Upwards of 45,000 volunteer birders participate in the all-out winter extravaganza annually. These are the energetic field heros and heroines whose tens of thousands of individual observations help keep track of what is happening to

North American species populations, particularly their winter ranges.

We couldn't be more delighted to be bringing these articles to you, along with our customary full range of superb features and reports.

As we embark on a new year, we wish you a full and rewarding 1993.

Stay tuned!



Answers to *That's Bird & Beetles Entertainment*, Vol. 46, No. 3, Fall 1992 *American Birds*. Don Freda and Judy Schramm, authors.

- | | |
|---|---|
| 1. "Blackbird" | 11. Rooster |
| 2. George Martin | 12. Birds in the sky |
| 3. Penguin | 13. Dove-tail |
| 4. "Flying" | 14. Vee Jay or Swan |
| 5. Drumming | 15. Ostrich |
| 6. Eagle | 16. "This Bird Has Flown"
(Norwegian Wood) |
| 7. Lark | 17. European Blackbird |
| 8. "Being for the Benefit
of Mr. Kite" | 18. Robin (When the
Red, Red Robin goes
bob bob bobbin
along...) |
| 9. "Blue Jay Way" | |
| 10. "And Your Bird Can
Sing" | |

Beautiful Books for Birders



Kingfishers, Bee-Eaters & Rollers

A Handbook
C. Hilary Fry and Kathie Fry

Illustrated by Alan Harris

Few birds can match the dazzling beauty of kingfishers, bee-eaters, and rollers. This authoritative new guide provides an up-to-the-minute review of all that is known about the world's 123 species.

The forty magnificent color plates show every species, all main subspecies, and most sex and age variations—350 portraits in all. Color maps showing breeding and wintering ranges appear opposite the plates. Text and plates are carefully coordinated, with emphasis on behavior, field characters, and identification.

40 color plates. 118 color maps. 26 line drawings.

Cloth: \$49.50 ISBN 0-691-08780-6

Not available from Princeton in the U.K., Europe, or the Republic of South Africa



New in paperback!

A Guide to the Birds of Panama

With Costa Rica, Nicaragua, and Honduras
Robert S. Ridgely and John A. Gwynne, Jr.

This is the first paperback version of the second edition of this popular guidebook. The authors have added new information on approximately 200 new species to this second edition. Over 300 additional species have been illustrated. More than a third of the color plates are new or revised.

Throughout the book changes were made to accommodate the explosion in knowledge of the birds of Panama and of neotropical birds in general. Also included is expanded and updated information on birdfinding in Panama, prepared with the assistance of two of Panama's best resident birders.

48 color plates. 53 line drawings.

Now in paper: \$29.95 ISBN 0-691-02512-6

Princeton University Press

ORDERS: 800-777-4726 • OR FROM YOUR LOCAL BOOKSTORE

LOWEST PRICE EVER ON WORLD'S FINEST BIRD WATCHING BINOCULAR

Don't miss the chance of a lifetime! The world's finest birding binocular-- the Bausch & Lomb Elite-- is now at its lowest price ever!

The Bausch & Lomb 8x42 Elite is unbelievably lightweight. It's weatherproof and rubber armor coated-- making the Elite an extremely durable binocular. Premium optics deliver an incredibly bright image, and it can even close focus under 12 feet. Comes complete with case, strap, and lifetime warranty.

SAVE \$100 \$659⁰⁰

FREE BINOCULAR BUYING GUIDE

Call 1-800-624-8107 To Order

Since 1914

National Camera Exchange

9300 Olson Highway, Golden Valley, MN 55427 We take trade ins...call for details! 30-day money-back guarantee. We accept VISA/Mastercard/Discover and AMEX. All prices subject to change. For in-state orders, call (612)546-6831. Out-of-state call toll free.



The discovery thrilled the media. After Dumbacher, Beehler and Daly published an article on the pitohui in *Science Magazine* last October, front page headlines appeared in newspapers across the country. Though the articles heralded the bird's supposedly unique toxicity, enthusiasm was perhaps driven by the realization that for all we think we know about life on earth, here was evidence that the earth still holds remarkable secrets.

"One of the most important discoveries in this to me," says Beehler, "is the reminder that we know so little about tropical forests. Researchers have been working in New Guinea for a hundred years and just now this comes up."

Of course some New Guinea tribes people have known about the Hooded Pitohui since the beginning of time. Researchers had never asked them about it. "It buggers up your tongue," the people in the Sepik River area in the north of the country told Dumbacher after he made inquiries about the bird's edibility. They commonly label it a "rubbish bird" and cast it on the heap of non-edible species along with raptors and scavengers.

Yet the species is not considered a "rubbish bird" everywhere in New Guinea, and that deepens the mystery of its toxicity. In the central mountains in the western part of the country, for example, Hooded Pitohui is eaten with skin intact, according to anthropologist Harriet Whitehead, who is doing a study of diet among the Seltaman people. Most Hooded Pitohui fall to

young boys trying out their hunting skills. When they kill one, it goes onto the coals with all the other rewards of the hunt, mostly species that congregate on fruit-laden trees where they offer an easy target. Whitehead said she ate a freshly plucked, charbroiled Hooded Pitohui with the skin and it tasted "just like you would expect a little bird to taste." Such a claim is an obvious invitation for laboratory analysis of the Hooded Pitohuis from this area of Papua New Guinea. If the results show little or no toxin in their flesh, then diet as a source of toxin in the birds in other parts of the country is highly probable.

In southeastern Papua New Guinea, the twist of evolution has led to a more hesitant consumption of the species. While the people in the town of Bonua consider the Hooded Pitohui a "rubbish bird," they have no reservations about downing the Variable. The problem is that the two species here are almost indistinguishable. Twenty-one races of the Variable Pitohui are known, each with distinct territories and unique coloration. However, in areas where territories border each other, such as near Bonua, the coloration of the Variable race is nearly identical to that of the neighboring species or race, in this case the Hooded.

Interbreeding may be one reason for the similarity.

Analysis of the skin and feathers of the Rusty Pitohui reveal it has only minute traces of the toxin found in the more brightly colored Hooded Pitohui.



VARIABLE PITOHIUI, LEFT PAGE. RUSTY PITOHIUI, RIGHT. PHOTOGRAPHS. WILLIAM PECKOVER/IREO

BIRD SLIDES

5000 SPECIES
from all over the world



SLIDE SETS

Endangered species, Owls, Bird families,
Eastern warblers, Herons, Raptors,
Shorebirds, Waterfowl

INDIVIDUAL SLIDES

Selected from over 65,000 images and
custom duplicated to suit your needs

Request our free North American catalog or send a list
of species desired, indicating age, sex, behavior or
color phase. Catalog slides are \$3.00 each, non-catalog
slides are \$4.00 each, with a minimum order of 5 slides
Allow 4-6 weeks for delivery. *(These slides are for non--
commercial use only and may not be duplicated.)*

VISUAL RESOURCES for ORNITHOLOGY

Write: **VIREO/Academy of Natural Sciences**
1900 Ben Franklin Parkway Phila, PA 19103

This season's regional reports contain an unusual amount of highly significant information. Not only were there interesting vagrants recorded in a number of regions, there were several large-scale population phenomena that occurred as well. These phenomena may be summarized as follows: First, the unprecedented "invasion" of eastern birds into the western United States, especially in Cali-

fornia, that started in the spring continued into the summer. This invasion, led by Northern Parulas, Hooded Warblers, and Kentucky Warblers was unprecedented. Second, the effects of El Niño on seabird populations continued. This included large numbers of warm water seabirds dispersing north along the Pacific Coast, with several species breaking early arrival date records for the season by weeks or even months. Perhaps more significant were the effects of El Niño on reproductive success. As was the case with the last major El Niño event, seabird reproduction was devastated in some areas of the Pacific, including areas close to home such as the Farallon and Channel Islands off California and islands off northwest Mexico. Third, while the western United States experienced record heat and continued drought, the central and eastern portion of the continent experienced record-breaking cold temperatures and precipitation. This cold, wet weather significantly impacted the reproductive success of easily monitored species such as swallows and Eastern Bluebirds, which use nest boxes. The impacts undoubtedly extended to other, less easily monitored insectivorous species as well. The cold conditions also apparently resulted in

THE CHANGING SEASONS

Summer 1992

By *Scott Terrill*
Kenneth P. Able
Michael A. Patten

several species of raptors lingering at their wintering area into midsummer.

These interesting and important observations were gathered largely by birders rather than professional ornithologists. In fact, it is probably fair to say that the remarkable influx of eastern birds into California would have gone undetected without the birding zealots who cover the coastal and desert vagrant "traps" almost daily during the season.

Not only were there records of occurrence of these southeastern birds, but several species bred for the first time in western states. For example, at least three pairs of Hooded Warblers bred in California, over a thousand miles from the normal breeding range. Northern Parulas likely bred for the first time in Arizona, and bred widely across California, including the first breeding records for southern California. Finally, a pair of White-eyed Vireos attempted to breed for the first time in Colorado. It will be very interesting to see if any of these species gain a foothold in the far west.

For the most part, the summer trends are actually continuations of patterns that started earlier. For example, El Niño effects on the West Coast were noted at least as far back as winter and spring, and the westward in-

flux of eastern birds began during the spring migration.

On a more general note, though we tend to think of the summer period as the breeding season, some species is migrating virtually any time. It important to keep in mind that the seasonality associated with the production of *American Birds* is primarily for convenience, and that particular avian phenomena are not discrete events, but are rather continuous processes.

In spite of this, many readers may feel that the summer breeding season is a rather mundane period compared to spring and fall migration periods. But this season's reports include no fewer than 19 first state or provincial records! Some of the sexier records among these were a Yellow Wagtail in Washington State, Cinnamon Hummingbird in Arizona (a first North American record), Rufous-necked Stint in Nevada, and Bridled Tern in Connecticut. There were also a number of interesting nesting records, including the first Boreal and Great Gray owls in Washington, Eared Trogon and Flame-colored Tanager in Arizona, first Elegant Trogon nest in New Mexico, first Band-rumped Storm-Petrel in Hawaii (if confirmed), the first confirmed nesting of Prothonotary Warbler in New England, the first breeding records of Yellow-bellied Flycatcher west of the Rocky Mountains (British Columbia) and a White-winged Tern that nested with a Black Tern in New York State.

There are scores of interesting records in this issue, and we leave it to the reader to thumb through and find them. The rest of this report is devoted to discussing the major events of the season.

INFLUX OF EASTERN MIGRANTS WEST

As summarized in last issue's Changing Seasons, a striking "invasion" of eastern passerines (especially "southeastern" *parulinae*) occurred in the western United States. The reader can get an idea of the true nature of this incursion by examining Table 1, which

compares the mean number of southeastern vagrants in California during the season ("spring" vagrants occur through June in California) over the past 10 years with the number of individuals of each species recorded during the 1992 season. Numbers such as 157 Northern Parulas, 72 Hooded Warblers and 38 Kentucky Warblers are mind-boggling.

Table 1. "Southeastern" vireos and warblers in California, April-July 1992.

Species	Ten-year average (1982-91)	April-July 1992 Totals
White-eyed Vireo	0.6	10
Yellow-throated Vireo	1.1	9
Northern Parula	18.6	157
Yellow-throated Warbler	1.7	9
Worm-eating Warbler	0.9	13
Kentucky Warbler	3.3	38
Hooded Warbler	6.2	72

Although the phenomenon was most conspicuous in California, it was by no means confined there. For example, Washington recorded its first Kentucky Warbler, and five Northern Parulas were exceptional. The season total for Northern Parulas in Arizona was an amazing 11, and a singing male with two juveniles near Phoenix supplied evidence that the species bred that state for the first time. Nevada recorded its eighth Kentucky Warbler and there were three Hooded Warblers in the Las Vegas area during the period. In addition to the widespread invasion of southeastern warblers, the middle Pacific Coast Region had higher than average numbers more northerly eastern migrants, including Red-eyed Vireos. However, this influx was apparently confined to northern California.

There are at least several hypotheses for explaining this phenomenon. The most plausible hypothesis is that weather conditions were associated with the displacement of numbers (if not most) of these birds. But, first, consider two other hypotheses. One centers on population trends. Perhaps these birds had an exceptionally suc-

cessful 1991 reproductive season. Or survivorship on wintering grounds was higher than normal. Perhaps a combination of the two resulted in very high populations returning to the breeding grounds. Similarly, over the past few decades, populations may have increased, leading to an increase in the number of vagrants.

Perhaps 1992 was an extreme representation of a continuing trend.

But population increases do not seem to be a likely explanation. Researchers that study migration over the Gulf of Mexico (the normal route for these birds) have not seen an increase in recent decades or, in particular, this past year. Sid Gauthreaux, who has been studying migrants on the Gulf Coast for the past three decades, saw days and even weeks go by in the spring of 1992 without migration occurring. This was during the height of normal migration and was virtually unprecedented. Interestingly, the only other season with similar lapses was spring 1983, another major El Niño year. In addition, two decades of radar data indicate a substantial decrease in numbers of trans-Gulf migrants over that period.

A second hypothesis relates to possible changes in wintering distribution of some southeastern migrants. There have been increases in the numbers of these birds, which traditionally winter in eastern and southern Mexico, reported in western Mexico in recent years. It is unclear whether the reports reflect actual increases or simply increased reporting. But this hypothesis would predict an increase in the numbers of southwestern records as the wintering populations in western Mexico expanded. Such an increase has been noted over the past several decades. One case is the Kentucky Warbler. The first record of this species in California occurred in 1968. By 1980, there were only nine accepted records. Currently, there are nearly 100 records (assuming the California Bird Records Committee accepts the 1992 accounts).

Nevertheless, an expanded winter range would probably be only partly responsible for the increased number of records in the west. While this hypothesis would predict a steady increase in the numbers of these birds seen in the southwestern United States, it would not predict the huge, discrete jump in numbers occurring in a single season, as happened last spring.

The most likely hypothesis hinges on weather conditions. It should be noted that many vagrants occur in the absence of unusual weather patterns and that such vagrancy is likely due to a number of variables such as genetic or neurophysiological factors. However, the magnitude of this season's event exceeded what would have been predicted based on more typical and consistent influences. The association between atypical weather patterns and unusual concentrations of vagrants is certainly not a new idea. Such associations have been documented for years in Europe (for example see a recent article in *British Birds*, Vol. 84, pp. 402-404) and have been described in North America as well. So we went to the weather maps for the spring migration period to see if any unusual climatic patterns had occurred.

Because the birds involved in the incursion were primarily trans-Gulf migrants, our immediate focus was on weather patterns over the Gulf of Mexico during the spring. As it turns out, it was indeed a peculiar season in that region. Typically, a powerful Bermuda high develops as the spring progresses. The clockwise airflow that develops generates persistent and fairly strong south, or south-southeast, winds across the northern Gulf coast. This pattern generally occurs daily after about mid-April, but is interrupted occasionally (and with decreasing frequency as the spring continues) by cold fronts from the north or northwest. This typical pattern never really developed in 1992. Instead, a series of weak high pressure systems tended to sit over the southeastern states, generating easterly winds across the Gulf.

The period of April 13–17 was characterized by east and even northeast winds across the Gulf. Such a condition is extraordinary that far into spring, and the effect should have been to shift trans-Gulf migration westward. However, shifting birds all the way to California is a different matter, and we do not see any obvious weather patterns in this period that would have contributed to this.

The period of April 18–22 was characterized by fairly typical weather over the Gulf. A southerly air flow developed and continued to the north and northeast over the eastern part of the continent. No westward displacement should have occurred during this period. In fact, this is the sort of weather pattern often associated with spring overshoots into the northeast.

The weather pattern that occurred from April 23–30 was even more atypical (and this is the period during which vagrants started to show up on record early dates in California). A massive Canadian high over the eastern United States drifted slowly southeast and dominated the weather for days. It produced north, northeast, and east winds over the Gulf, though for the most part the winds were not very strong. The duration of this system was unusual for so late in the spring (it is basically a winter pattern). Unlike the earlier system, this pattern set up a persistent easterly and southeasterly flow of air across the southwest all the way into California. Thus, the situation appears more appropriate for explaining the phenomenon, although we might have predicted that a different set of species would have been involved this late in the month (i.e., the majority of Hooded and Kentucky warblers and Northern Parulas generally migrate across the Gulf earlier in the month). However, the conditions promoting easterly and northerly winds across the Gulf earlier in the month (April 13–17) may have delayed the normal movement of these birds somewhat.

Another interesting and unusual

situation occurred in May. A low pressure system was centered over the southeast California-southwest Arizona region for 24 days. The effect was to pump easterly and southeasterly winds across the southwest and into California for much of the month. Humid Gulf air moved to the northwest and caused monsoon-like conditions in Arizona in May, which generally do not occur until July. This unusually prolonged easterly and southeasterly wind flow may have contributed to, or continued, the westward movement of these birds.

In addition to the large numbers of vagrants in the far west, several other patterns of vagrancy appear to support the displacement theory. First, one might predict that typical Caribbean migrants (e.g., Black-whiskered Vireo, Gray Kingbird) should have appeared on the western Gulf coast. In fact, there were two Black-whiskered Vireos in Texas, where there are only about 10 previous records, and there were a number of extralimital Black-whiskered Vireos from Dauphin Island, Alabama, to Grand Isle, Louisiana.

There was a Gray Kingbird in Texas. This is only the third time the species has been detected in that state, and the first time since 1974. Also in line with western displacement, the more easterly migrating species, such as Blackpoll Warbler and Bobolink, were present in much better than average numbers on the Texas coast. Thus, it does appear that much of the southeastern migration was shifted somewhat westward.

The western half of the country wasn't the only area to show the effects of these strange weather patterns. The east coast of Florida, being on the east side of the high pressure systems much of the time, experienced westerly and northwesterly winds, which were associated with spectacular numbers of warblers (e.g., Cape May, Black-throated Blue, and Blackpoll warblers, American Redstart, Ovenbird, Common Yellowthroat) which interrupted migration to pause on the lower

east coast the last week in April and the first week in May. Several of these species occurred in record high numbers in this area.

We admit that this analysis is entirely post hoc. The problem with this sort of analysis is that one can usually find some weather pattern to account for any bird occurrences one wants to explain. In spite of this, we feel that this hypothesis has a number of things going for it. First, the relevant weather patterns were profoundly abnormal for this time of year and they caused large-scale shifts in normal wind patterns. Second, for the most part, the seasonal occurrences of these abnormal conditions were generally appropriate to account for the phenomenon. Third, these conditions profoundly influenced migration around and over the Gulf of Mexico. Fifth, a number of patterns of vagrancy (not just in California) are consistent with the hypothesis that a large-scale westward displacement of southeast migrants occurred.

The true test of this hypothesis will occur when conditions similar to those in spring 1992 occur in the future. We can now make some specific predictions about the effects of such conditions. If they come about, this would lend credibility to the hypothesis. If not, it's back to ground zero.

El Niño

Anomalous warm water appearing in the coastal and equatorial ocean waters off of Peru and Ecuador is termed the El Niño. This periodic episode is accompanied by an atmospheric force known as the Southern Oscillation. The devastating effects of El Niño-Southern Oscillations (ENSO) on seabird populations are well-documented. The most recent ENSO effects on water temperatures and currents continued from last season. These effects were the most conspicuous since the last major ENSO event in 1983, and the effects on bird populations were just as evident. On the west coast, Brown Pelicans, Heermann's

Continued on page 1182

HOW TO READ THE REGIONAL REPORTS

Birds have no respect for range maps. Bird distribution in North America is constantly changing, as birds expand their ranges into new areas, disappear from former strongholds, or alter their patterns of migration.

Our knowledge of bird distribution is also changing constantly, as discoveries continue to come in. Keeping up with all these developments is a challenge for ornithologists, conservationists, and birders.

The Regional Reports, published four times a year, contain a wealth of information about our dynamic birdlife. To those seeing the reports for the first time, they might appear difficult or technical, but they are not; anyone with any birding experience will find the reports easy to understand. If you have hesitated to dip into this section of the magazine, we invite you to read the report from your area of the continent; we predict that the information there will alternately surprise you and confirm your ideas about birdlife in your region. To help you get started, here are answers to some questions that may occur to first-time readers.

What kind of information is included, and do the Regional Editors just report everything that's reported to them?

Regional Editors do not report every sighting of every bird. Such a list would be huge, unwieldy, and not very useful. Instead, they solicit reports from as many observers as possible, screen the records for accuracy, choose those that are most signi-

ficant, look for trends and patterns of occurrence, connect scattered bits of information, and ultimately come up with a concise, readable summary of the real bird news—the important avian events and trends of the season throughout their region.

Why are there so many abbreviations in the text?

We abbreviate some frequently-used words and phrases to save space. Most of these are easy to understand and remember. (See the list of abbreviations at the end of this section.) In addition to these standard abbreviations, some Regional Editors use shortened versions of the names of some birding hot spots; they list these local abbreviations in a separate paragraph, just after their introductory comments and just before their main species accounts.

What do the initials in parentheses mean?

Most records published in each report will be followed by initials, to indicate the source: the person(s) who found or reported the bird(s) mentioned. The initials may be followed by et al. (short for et alia, meaning “and others”), or preceded by fide (literally, “by the faith of”—meaning that this is a second-hand report, and the person initialed is the one who passed it along to the Regional Editor). A dagger (†) before the initials means that this person turned in written details on the sighting.

There are good reasons for giving credit to the observers involved. Readers may be reassured about the accuracy of surprising sightings if they know who the observers were; researchers who want to know more about a certain record may be able to contact the observers directly.

Who are the people who send in their sightings?

All observers are invited to send in notes to their Regional Editors: details on rare sightings, species that were scarcer or more numerous than

usual during the season, unusual concentrations on migration, and so on. Reading the reports for your region for a few seasons is the best way to find out what kinds of information are desired. Although the Regional Editors cannot cite every record that they receive, every contributor helps them to produce a more thorough and accurate summary.

Why are some bird names in heavier or blacker type?

We use boldface type to draw attention to outstanding records of rare birds. General categories of birds that the Regional Editors would place in boldface would include: any species that has been recorded fewer than 10 times previously in a given state or province; any new breeding record for a state or province; or any bird totally outside established patterns of seasonal occurrence. (For the most part, records are not boldfaced unless they are backed up with solid details or photographs.) Birders who like to know about rare birds (and most of us do) can get a complete rundown of the season's outstanding rarities by scanning all the Regional Reports for those boldfaced birds.

What are the boxes marked “S.A.”?

“S.A.” stands for “Special Attention” (and, by coincidence, is pronounced “essay”). The purpose of the boxed essays is to draw attention to particularly noteworthy phenomena or trends.

Likely topics for essays include new population trends or new patterns of bird distribution, unusual invasions or migration events, field research projects that have yielded new data, specific conservation problems that have an impact on birdlife, or detailed discussion of some outstanding (or perplexing) rare bird record. Experienced readers of *American Birds* make it a point to flip through all the Regional Reports and read all the S.A.s, even in regions where they do not read the rest of the text.

MARKET PLACE

Marketplace Rates: Advertise your product or service in our Marketplace. Rates are: \$1.15/word for one insertion; 90¢/word for 5 insertions. Send payment with copy. Copy deadlines are: Spring issue: March 1; Summer issue: May 1; Fall issue: July 15; CBC issue: August 1; Winter issue: October 15. Send to: *American Birds*, Marketplace, 700 Broadway, New York, NY 10003.

BOOKS

BUTEO BOOKS—*The source for bird books in North America: field guides (domestic and foreign), handbooks, monographs. Over 1,000 titles in stock. Also, rare and out-of-print ornithology books bought and sold. Call (1-800) 722-2460 (USA and Canada) or write: Route 1, Box 242, Shipman, VA 22971, USA.*

OFFERS

NEVER MISS RARE BIRDS AGAIN! Complete national guide to rare bird hotlines. AUDUBON, NATURE CONSERVANCY SANCTUARIES, NATIONAL WILDLIFE REFUGES, FORESTS, PARKS—all quick referenced by state! Acclaimed by birders as the number one birding publication of 1992. \$9.95. FRIENDS OF NATURE, 43-C Quail Lane, Jacksonville Beach, FL 32250. The ultimate vacation planner! Recently revised! Immediate delivery.

MIX BUSINESS and pleasure with a Wild Bird Center franchise. Earn a professional income running your own specialty retail store helping people enjoy wild birds. Complete start-up package and ongoing support as you make a positive difference in your community. For information write George Petrides, President, Wild Bird Center of America, Inc., 7687 MacArthur Boulevard, Cabin John, MD 20818, or call (1-800) WILD BIRD.

ENDANGERED SPECIES COLORFUL BLOCKPRINT NOTE SETS. 24 variety pack, \$12.00. Meyer, 12775B Mandarin Road, Jacksonville, FL 32223.

BLUEBIRD HOUSES. Build your own, 3 patterns, \$2.00, also comments from 40 years of Bluebird. Ideal Bluebird House, POB 123, Poneto, IN 46871.

OPTICAL EQUIPMENT

BINOCULARS AND SPOTTING SCOPES Compare our prices. Bausch & Lomb Bushnell Swift Optolyth Mirador Jason. YODER OPTICS, 4501 T.R. 606 Fredricksburg, OH 44627; (216) 893-2464.

TRAVEL

COSTA RICA Rainforest, 900m guided tours with resident birder. Transportation, S.J. to Ranch to S.J. Delicious meals, hot water showers, spacious rooms, and horseback riding. All above included from \$390.00/week. Rancho Naturalista, Apdo. 364-1002, San Jose, Costa Rica. Phone (506) 39-8036.

HOLLAND. Your private birdwatching guide for \$45/day, \$69 for your party of max 8 (excl. car/acc.). Brochure: Mr. Emile Dirks, Schepenlaan 31, 1503 HK Zaandam, The Netherlands; Phone 01131-75123227.

SEE THE FLAMINGOS AT SAND KEY. *Birding by boat.* Yours to enjoy as you explore miles & miles of Everglades National Park. Delight in seeing and photographing Terns, Spoonbills, Herons, and Egrets in their natural habitat. Call Capt. Geoff Tindall, 107 Orange Lane, Islamorada, FL 33036; (305) 852-1457. Reasonable rates.

ARGENTINA Birdwatching in the Pampas all year long, over 100 species likely to be seen during one/four day/s trip. Professional birding guide, car and full board accommodations from \$90 daily per person, max 7. Brochure, species list: Ricardo Clark, Paraguay 1847—1 D, (1121) Buenos Aires, Argentina; Phone (54-1) 814-2673, Fax (54-1), 812-5345.

DISCOVER THE BIRDS OF AUSTRALIA WITH Cassowary House, Kuranda Queensland 4872; Emu Tours, PO Box 4 Jamberoo NSW 2533; Falcon Tours, 1 Simons Drive, Roleystone WA 6111; Philip Maher Inland Bird Tours, 94 Hunter Street, Deniliquin NSW 2710. Graham Pizzey, Victoria Valley Road, Runkeld Vic 3291. Six great opportunities to see the unique birdlife of Australia.

A NATURE JOURNAL by Dennis Puleston is available in bookstores, or it can be directly ordered from the publisher with this form.

Name _____

Address _____

City _____

State _____

Zip _____

Telephone _____

Please send me _____ copy(ies) of *A NATURE JOURNAL* at \$25.00 a copy, post paid.

I enclose: check money order for \$ _____ .00

(NY and CA residents please add sales tax.)

Please send check or money order to:
W.W. NORTON & COMPANY, INC.
500 FIFTH AVENUE
6TH FLOOR
NEW YORK, NY 10110
DEPT. AJN

Think quick!

When someone says the word silly, do you mentally respond “goose?”

Throughout the ages and in every culture, birds have represented everything from human characteristics to somber omens. Let's see how well you can make the association!

1. Caricaturists often put a cap and gown on this bird, which is considered the picture of solemn wisdom.
2. All over the world, this bird represents spring.
3. A reputation for easy credulity or foolishness has turned this name into a transitive verb.
4. Senseless chattering or mimicry: That's what comes to mind with this tropical denizen.

5. She soars over a nation with nobility in power.

6. Keep an eye out for this bird — vainglorious and foppish, but beautiful to behold.

7. Since the Middle Ages, this bird has symbolized poaching on another's domestic tranquility.

THAT'S BIRD & WORD ENTERTAINMENT

9. Just plain stupid. But this bird was admired by at least one Founding Father.

10. “Come in, she said, ‘I’ll give you shelter from the storm.’” What bird represents the onset of a tempest?

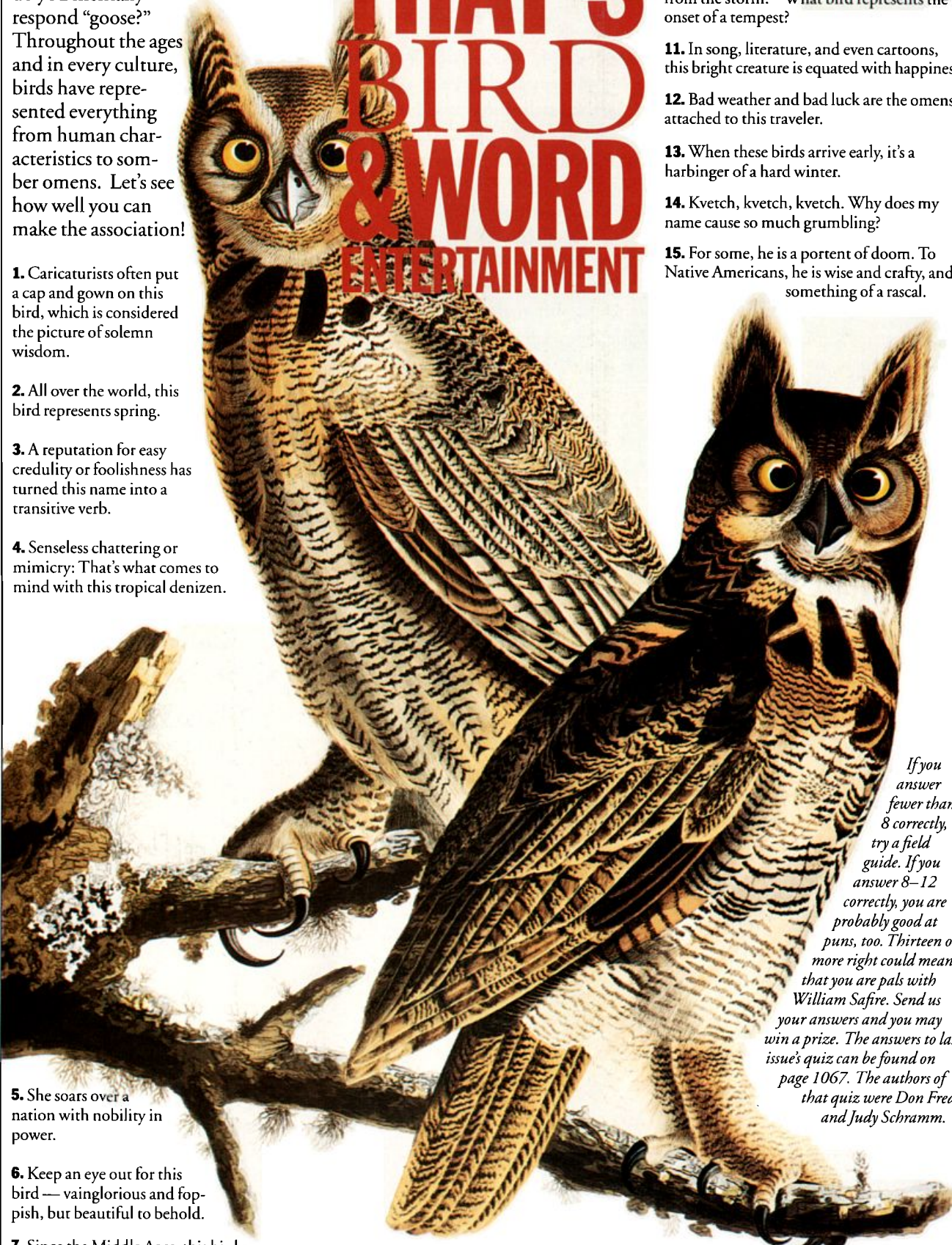
11. In song, literature, and even cartoons, this bright creature is equated with happiness

12. Bad weather and bad luck are the omens attached to this traveler.

13. When these birds arrive early, it's a harbinger of a hard winter.

14. Kvetch, kvetch, kvetch. Why does my name cause so much grumbling?

15. For some, he is a portent of doom. To Native Americans, he is wise and crafty, and something of a rascal.



If you answer fewer than 8 correctly, try a field guide. If you answer 8–12 correctly, you are probably good at puns, too. Thirteen or more right could mean that you are pals with William Safire. Send us your answers and you may win a prize. The answers to last issue's quiz can be found on page 1067. The authors of that quiz were Don Freda and Judy Schramm.

8. Representing filial piety and conjugal virtues, this bird also brings good news.

PENTAX



You Won't Miss the Little Things

Quality details in the design and construction of Pentax binoculars translate into quality viewing of details in the field. From compact binoculars to the new HG Spotting Scope, Pentax optics deliver sharp, strain-free viewing under all conditions.

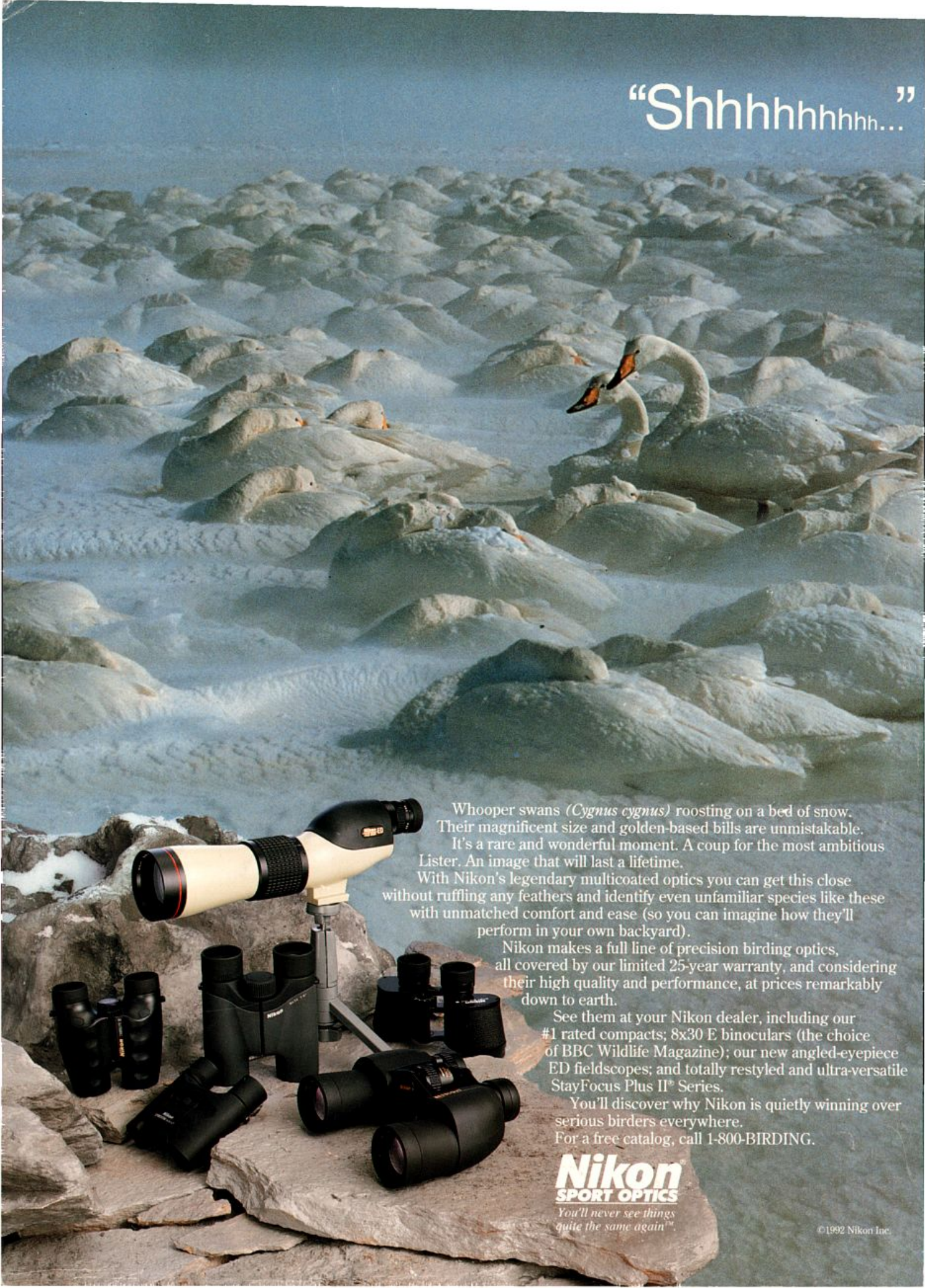
Whether you are choosing your next viewing instrument, or viewing your next bird, you won't miss the little things if you pick a Pentax.

Manufacturing and Servicing Fine
Binoculars • Monoculars •
Cameras • Lenses • Video

35 Inverness Drive East
Englewood, CO 80112



“Shhhhhhhhh...”



Whooper swans (*Cygnus cygnus*) roosting on a bed of snow. Their magnificent size and golden-based bills are unmistakable.

It's a rare and wonderful moment. A coup for the most ambitious Lister. An image that will last a lifetime.

With Nikon's legendary multicoated optics you can get this close without ruffling any feathers and identify even unfamiliar species like these with unmatched comfort and ease (so you can imagine how they'll perform in your own backyard).

Nikon makes a full line of precision birding optics, all covered by our limited 25-year warranty, and considering their high quality and performance, at prices remarkably down to earth.

See them at your Nikon dealer, including our #1 rated compacts; 8x30 E binoculars (the choice of BBC Wildlife Magazine); our new angled-eyepiece ED fieldscopes; and totally restyled and ultra-versatile StayFocus Plus II® Series.

You'll discover why Nikon is quietly winning over serious birders everywhere.

For a free catalog, call 1-800-BIRDING.

Nikon
SPORT OPTICS

You'll never see things
quite the same again™