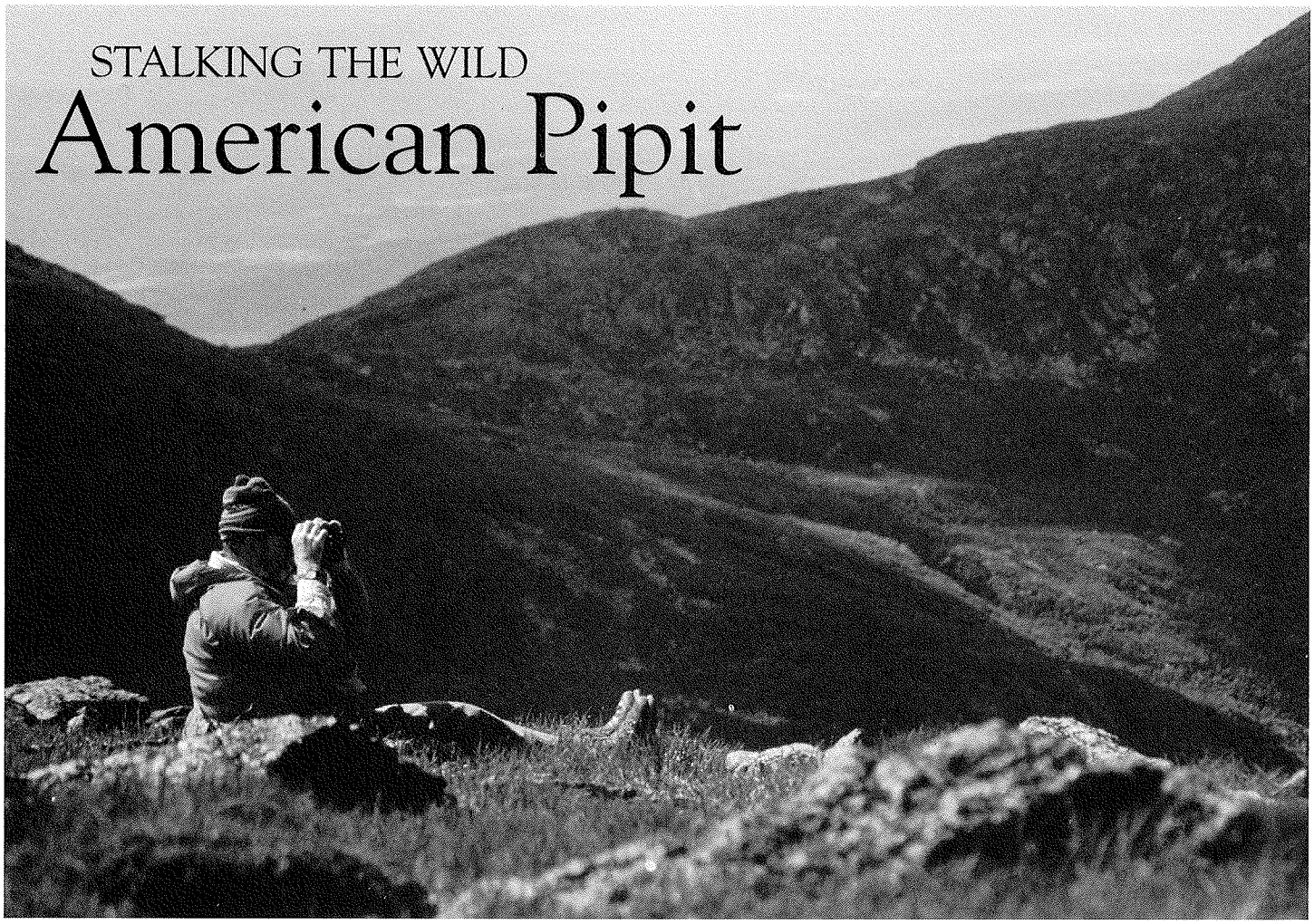
STALKING THE WILD

American Pipit



by Chris Martin

JOHN ALLEN SCANS FOR PIPITS AT THE EDGE OF THE GREAT GULF CHRIS MARTIN

In the summer of 1998, the ASNH Conservation Department embarked on an ambitious study of the American pipit in northern New England. Our work focused on Mt. Washington, the Northeast's highest peak. Despite the mountain's legendary reputation for foul weather, ASNH staff and eight hardy volunteers tallied over 100 person-days of "summit time" from June through August, learning much about the pipits' ecology and the stark, treeless landscape they inhabit.

What is a Pipit?

The American pipit (formerly named water pipit) is a slender, sparrow-sized migratory bird, one of very few ground-dwelling songbirds that breed at high altitudes in alpine meadows and on the arctic tundra. Pipits feed on seeds and insects, with their summer diet consisting almost exclusively of the latter. Their compact nests, built of dried grasses or sedges, are recessed into the soil and shielded from montane weather extremes by plant tussocks or overhanging rocks.

A common summer resident in Alaska, extreme northern Canada, and along the crests of our continent's highest western mountain ranges, American pipits are known to breed in only three isolated mountain-top locations east of the Rockies: in the Chic Chocs Mountains (3600-4350 ft.) on Quebec's Gaspé Peninsula, on Mt. Katahdin (5257 ft.) in northern Maine, and on Mt. Washington (6288 ft.), which currently marks the southern breeding limit for pipits in eastern North America.

Past as Prologue

Botanists and other naturalists have trekked across alpine summits in New Hampshire's Presidential Range, especially to the top of Mt. Washington, since the 1820s. Despite all the scrutiny afforded the area by early naturalists, the *Atlas of Breeding Birds of New Hampshire* notes that the state's first breeding season records of pipits in potential nesting habitat occurred more than a century later, first on Mt. Madison (5367 ft.) on July 20, 1937, and later on Mt. Washington on June 19, 1965. Starting in the mid-1980s, a series of observations by birders provided circumstantial evidence that pipits might, in fact, be breeding on the "Rockpile."

Finally, on June 29, 1991, while visiting an area below Mt. Washington's summit called the "Cow Pasture," Chris Rimmer, a biologist with the Vermont Institute of Natural Science, found and photographed a female pipit on a nest containing five eggs. As far as I have been able to determine (present study excluded), Rimmer's detailed account was apparently the *only* documented pipit nest record from *any*

ON MOUNT WASHINGTON

THE FIRST ADULT MALE PIPIT EVER BANDED ON MT. WASHINGTON; JULY 16, 1998 WENDY JESS

eastern U. S. site since 1940. (A pipit nest was found on Katahdin on July 10, 1939, and it is widely assumed that a small population has bred there since, but actual nest searches have apparently not been done there in nearly 60 years.)

With support from the U. S. Forest Service (USFS), ASNH began the first of five summers of pipit surveys on Mt. Washington in 1992. Volunteers walked summit trails and recorded sites where pipits were seen or heard. When we overlaid these sightings from 1992-96 on detailed alpine vegetation maps of the entire Presidential Range (developed by the Appalachian Mountain Club through a grant from the Rivendell Foundation), we were struck by the fact that nearly all sightings clustered in areas classified as either sedge meadow or cushion tussock vegetation. So, as part of a breeding bird survey of the White Mountain National Forest (WMNF) in 1997, two ASNH field technicians hiked 20 miles of trail transects across the crest of the Presidentials, concentrating on areas dominated by sedge meadows and cushion tussocks. Expecting to find new pipit enclaves on these adjacent 5000-footers, we were surprised to find that none supported detectable activity.

Refocusing on Mt. Washington

Our 1998 field work began on June 9-11, when ASNH field technician Paul LaRose, with help from two members of the WMNF breeding bird survey crew, started mapping locations of territorial flight displays by male pipits. Using a weather window of three perfect spring days wedged between a rime ice storm on June 4-5 (temperatures as low as 20°F and winds of 119 mph!) and twelve inches of rain on June 12-15, our team pinpointed breeding territories that we would revisit the rest of the summer. We eventually identified at least eleven territories and accounted for at least 21 adult pipits on Mt. Washington, scattered across the peak from the Cow Pasture to near the Lakes of the Clouds hut.

Watch and Wait... and Wait

Nest-finding began in earnest in late June, when ASNH field technician Randy Harrison joined the team. Our search technique was simple: find a pipit, hunker down out of the wind, and watch from a distance until repeated activity revealed a likely nest site. Once we had a rough fix on a nest, we traversed the area in question (rock-hopping to avoid damaging fragile alpine plants) and usually flushed up a female. We found three nests by the end of June using this method. By the end of July, we had discovered nine!

Determining Nesting Success

Eight of the nine nests we located were active with a minimum of 43 eggs (5.4 eggs/nest). We found that 81% (35 of 43) of these eggs hatched (4.4 young/nest). We estimate that 71% (25 of 35) of hatched young fledged (3.1 young fledged/nest). We retrieved five eggs that failed to hatch for future genetic analyses, but three more unhatched eggs were lost to an unknown cause before we could recover them. Ten hatchlings died before fledging, including an entire brood of six that we believe were predated, three more found dead at nests, and one lost to an unknown cause. We estimate that a minimum of 27 young fledged, including at least two more chicks from two nests that we could not locate.

Measuring and Marking Individuals

Working under a New Hampshire Fish and Game Department (NHFG) permit, we captured, measured, photographed, and banded as many pipits as possible. We found that some tightly-incubating females could be trapped on nests using hand-held butterfly nets. Adults delivering food to young could be caught in a mist net strung over a hula hoop and tripped remotely using fishing line. Carefully timed nest visits allowed us to examine and band diminutive nine- to twelve-day-old hatchlings, which often weighed less than 20 grams each. By summer's end, we had measured and placed tiny aluminum leg bands on 30 birds, including seven adults from four breeding territories and 23 juveniles.

MT. WASHINGTON - A quartet of fuzzy, four-day-old American pipit chicks lay at the bottom of a nest hollowed out in the thin soil of a sedge-covered patch in the lower end of the Cow Pasture, located amidst lichen-covered grey boulders on the flank of Mt. Washington. The chicks' pink skin gleamed through their downy grey feathers, and their large bulging eyes were still unopened. When a shadow passed over the nest's small round opening, the little birds' heads rose up and all of them opened their beaks wide in expectation of being fed.

Chris Martin, the senior biologist for the Audubon Society of New Hampshire who is supervising this special alpine-zone investigatory project, then reached gingerly into the hollowed-out spot and removed a tiny, mottled-brown unhatched egg, this to preserve it for DNA testing. In a laboratory at a later date, this egg will be analyzed to establish baseline data essential to determining whether or not the pipits which nest on the Rockpile are a unique or distinguishable subspecies of *Anthus rubescens*, the American pipit.

Written by Edith Tucker. From an article previously published on July 8, 1998, in The Coös County Democrat. *Used with author's permission.*

Wrapping up Field Work

Most young birds had left their nests by the end of July, but we still had plenty of work left to do. With help from NHFG biologists Will Staats and Andy Timmins, we obtained precise GPS mapping coordinates for all nine known nests during a single rapid-paced field day in early August. Lastly, we conducted nest site vegetation surveys, measured slope and directional aspect at each nest, and recovered nest lining material in hopes of possibly learning more about pipit parasites.

Future Plans

We want to return to Mt. Washington next year to continue field work and to look for the return of banded individuals. We hope to expand the geographic scope

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WEB NEWS

1998 Field Season in Review

More information and pictures about the 1998 field season are now available! Click on Current Research to access them.

Acknowledgements

Many thanks to **Gran-Net Innovative Technologies Group,** of Salem, and volunteer **John Munier** for the design and maintenance of this site.

www.nhaudubon.org

Wildlife Department Funding

by Rich Cook

This newsletter is devoted to our 1998 field season projects, and I hope you enjoy the summaries of our project work.

All of our wildlife monitoring and research programs receive support from ASNH members. In 1998, approximately 30,000 of membership and annual fund dollars went to these projects. In addition, over $19,000 was raised through a record-breaking Birdathon/Bloomathon. It is thanks to you that Audubon is conducting valuable research on a broad variety of projects throughout the state.

Much of the work we do is of state, regional, or national significance and receives support from a variety of public and private sources. We have many partners, which include: N.H. Fish and Game Department's Non-game and Endangered Species Program, U.S. Fish and Wildlife Service, U.S. Environmental Protection Agency, N.H. Department of Environmental Services, U.S. Forest Service, N.H. Coastal Program, and Gulf of Maine Council.

Other funders include the Davis Conservation Fund, Wharton Foundation, Norcross Foundation, Rivendell Foundation, Wild Wings Foundation, National Forest Foundation, USF&WS Conte National Wildlife Refuge, Smith College, and a private consulting firm.

Very often these partners and/or funders can pay only a portion of the monies needed to complete a project. That's where your support comes in.If you would like to support the Wildlife Department directly, here are several ways:

Give to the Wildlife Challenge Fund
This fund was created in 1996 as an opportunity for members to provide additional support to projects. In 1997, over $7,000 was donated to this fund. If you are interested in supporting any of these projects through the Wildlife Challenge Fund, please contact Rich Cook or Jennifer Fox at 224-9909.

Support a Project Directly
In addition to the projects listed above, for which we would welcome your support, there are several long-term monitoring projects that have been greatly reduced in scope as a result of budget constraints: northern harriers ($3,000), pied-billed grebes ($10,000), and great blue herons ($5,000). If you would like to donate all or part of the money needed for any of these projects, your gift would be greatly appreciated. Call Rich Cook at 224-9909.

Participate in Birdathon/Bloomathon
Join us next spring! Monies raised go directly to the Wildlife Department.

Buy Wildlife Department Products
Currently, we are selling tern t-shirts and decoys to help raise money for the Tern Restoration Project. If you would like to order one or both, please call 224-9909 for a catalog or to place an order. Thanks!

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of this study to include neighboring pipit populations on Mt. Katahdin and, perhaps some day, even Quebec's Chic Chocs Mountains. ASNH is currently discussing future research opportunities on Mt. Katahdin with representatives of Baxter State Park and Maine's Department of Inland Fisheries and Wildlife. Our future plans also include comparing Mt. Washington data with similar information obtained in pipit studies from elsewhere in North America. Ultimately, we hope that, by closely studying each of the Northeast's insular pipit populations, resource managers from across the region will be better able to protect all the creatures living in the land above the trees.

Funding

Our study of the ecology of American pipits on Mt. Washington would not have been possible without the generous financial support of the Rivendell Foundation, which makes grants to protect mountains and alpine areas in the Northeast. We also thank donors to ASNH's Wildlife Challenge Fund for providing additional funding. Other essential assistance was provided by the USFS, NHFG, the Mt. Washington Auto Road, and the AMC. Finally, I am personally grateful to eight unstoppable ASNH volunteers, whose combined 200 hours of donated time on the mountain expanded our project's total personnel time by more than 35%.