

pigmentation and size are inconsistent among founded colonies of Icelandic *argentatus*. I (Snell 1991:336) argued that "There is no consistent evidence for significant association between plumage melanism and morphology in these populations, and inconsistent correlations likely reflect sampling artifacts within a heterogeneously melanized population."

Ingolfsson (1993) stated that I, "neglected to note that the pattern of reduced melanism is significantly different [in European populations] from that found in Icelandic gulls . . . Gulls from northern Norway and adjacent Kola Peninsula are exceptions, where many birds are similar to Icelandic hybrids."

Indeed, the nature of the patterning of many European *argentatus*, especially those from more southerly regions, differs from both Icelandic and Scandinavian conspecifics. However, as I (Snell 1991) argued, there is little reason to suspect that the founders of the Icelandic populations originally dispersed from these southern populations. The fact, as Ingolfsson (1993) agreed, that "Gulls from northern Norway and adjacent Kola Peninsula are exceptions, where many birds are similar to Icelandic hybrids," represents the fundamental and essential biological basis of my (Snell 1991:329) alternate hypothesis that the variable plumage of Icelandic *argentatus* represents "the genetic legacy of light-winged *L. argentatus* founders, possibly dispersed from Scandinavia, where light-winged *L. argentatus* individuals are present, albeit in low frequency."

In conclusion, I have taken Schueler and Rising's (1976) approach that to invoke hybridization, at the very least, data sets in addition to those that originally

suggested the existence of the hybrid zone should be presented. No data sets in addition to those relating to plumage characters are available to support the hybridization hypothesis for Icelandic *argentatus*. I (Snell 1991) presented evidence that recently founded Icelandic *argentatus* populations differ little from the long-established conspecifics in northern Norway with regard to plumage and skeletal morphology, that the supposedly intermediate characteristics in *argentatus* or *hyperboreus* are historically present in these taxa, and that extant plumage patterns in Icelandic *argentatus* simply represent intraspecific variation.

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## Type Specimens and Basic Principles of Avian Taxonomy

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"Ornithology" may be defined as the scientific study of birds. No aspect of avian biology, including management and conservation, can be carried out without reference by name to birds at some taxonomic level. Thus, the names of species of birds, and of groups of species, can fairly be considered to be of primary importance in ornithology. To be useful, these names themselves must be defined and related to biological entities. The definition of a name is accomplished by the designation of a "type." The *International Code of Zoological Nomenclature*, in paragraph (C) of Article 72 (third edition, 1985), establishes criteria for eligibility of a name-bearing type. The type of a species or sub-

species name is the biological specimen defined by the name, and later use of the name implies specific or subspecific identity with the type. It is imperative, therefore, that a type be available for study and comparison so that the identity of other material with it can be established.

These principles, now considered basic by trained taxonomists, were not well established until the early part of the twentieth century. Before that, many species-group names were proposed without designation of a type and, particularly in birds, many were named on the basis of a painting or drawing. The *Code* recognizes this but establishes that the type is the spec-

imen illustrated, not the illustration. Before the preparation and preservation of specimens was widespread and the value of specimens fully understood, many birds that were illustrated were discarded. In effect, there are no extant types for those names, and we must rely on the illustrations or other evidence to establish the populations of which the types were examples. Although we accept this for the past, we see no excuse, justification, or reason in the present or future for naming bird taxa without a useful type specimen that can be compared to standard museum specimens.

The undersigned individuals decry recently published descriptions of bird taxa without extant specimens to serve as types. That practice does a disservice to ornithology. Those who are unaware of or unwilling to abide by accepted principles and practices of systematics and taxonomy should excuse themselves from those aspects of ornithology. Therefore, the undersigned individuals make the following recommendations:

1. That the International Commission on Zoological Nomenclature specify in the next edition of the *Code* that a type must be a specimen preserved in a museum or similar institution and that an organism not so preserved but merely depicted by a photograph or other illustration be ineligible for a type.

2. That editors of journals or other literature concerning birds summarily reject and refuse to publish papers that attempt to describe and name a taxon for which no actual specimen is available and deposited in a museum.

3. That the type specimen be of such a kind that it demonstrates all characters used in the diagnosis of that new taxon.

4. That those who teach ornithology include training in taxonomy and the principles of the *International Code of Zoological Nomenclature*, in the preparation of specimens, and in the value and importance of properly preserved specimens.

5. That persons not trained in the principles of taxonomy seek the assistance and advice of trained

taxonomists if they wish to name a population of birds.

6. That agencies charged with the issuance of permits for the collecting of birds for scientific purposes routinely include provision in those permits for the collecting of specimens that the permittee considers to be taxonomically problematic.

The following ornithologists have agreed in writing to the concepts of this statement, if not its precise wording: **Argentina**, J. R. Navas. **Australia**, W. Boles, J. Calaby, M. Clayton, P. J. Fullagar, R. E. Johnstone, I. J. Mason, G. C. Richards, R. Schodde, J. C. Wombey. **Austria**, H. Schifter. **Brasil**, H. F. A. Carmargo, D. M. Teixeira, J. Vielliard. **Canada**, J. C. Barlow, E. H. Miller, H. Ouellet. **China**, Tso-Hsin Cheng. **Colombia**, H. Granados, F. G. Stiles. **France**, C. Erard. **Germany**, S. Eck, R. van den Elzen, J. H. Haffer, C. König, D. S. Peters, G. Rheinwald, K. L. Schuchmann. **Kenya**, C. Muringo-Gichuki. **Mexico**, J. E. Morales Pérez, A. R. Phillips, A. G. Navarro Sigüenza. **Netherlands**, R. W. R. J. Dekker, K. H. Voous. **Peru**, M. A. Plenge. **South Africa**, R. K. Brooke. **Sweden**, P. G. P. Ericson. **Switzerland**, U. N. Glutz von Blotzheim. **United Kingdom**, I. Bishop, P. Colston, A. Knox, D. Snow, M. P. Walters. **United States**, J. W. Aldrich, D. Amadon, A. V. Andors, J. P. Angle, R. C. Banks, G. F. Barrowclough, L. C. Binford, W. Bock, P. Brodtkorb, M. R. Browning, G. A. Clark, Jr., C. T. Collins, R. W. Dickerman, J. W. Fitzpatrick, M. S. Foster, D. D. Gibson, S. M. Goodman, J. P. Hubbard, P. S. Humphrey, H. F. James, N. K. Johnson, S. Keith, R. S. Kennedy, L. F. Kiff, S. M. Lanyon, W. E. Lanyon, D. Matthiesen, B. L. Monroe, S. L. Olson, J. P. O'Neill, K. C. Parkes, R. A. Paynter, Jr., A. T. Peterson, J. V. Remsen, Jr., M. Robbins, S. A. Rohwer, K. V. Rosenberg, G. D. Schnell, T. S. Schulenberg, F. H. Sheldon, L. L. Short, C. G. Sibley, F. C. Sibley, D. W. Steadman, H. B. Tordoff, M. A. Traylor, F. Vuilleumier, G. E. Watson, D. E. Willard, D. S. Wood, G. E. Woolfenden, R. M. Zink, R. L. Zusi. **Zimbabwe**, K. Hustler, A. Kumirai.

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## Research, Conservation, and Collaboration: The Role of Visiting Scientists in Developing Countries

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As awareness of environmental problems and the need to protect our natural resources or use them wisely has grown, scientists have become increasingly interested in conservation. Some individuals are

involved in conservation-related activities through research or teaching, but most of us participate only as citizens concerned about the world in which we live. Often, we decline to take an active role in con-