NACC Proposals 2007-B

Recognize *Larus smithsonianus* as a species

Larus smithsonianus was originally separated from *L. argentatus* on the basis of differences in size and wing tip markings (Coues 1862) but has been considered only subspecifically distinct since 1873.

In a study of the mitochondrial DNA control region and cytochrome-*b* haplotypes of the large white-headed gull complex, Crochet et al. (2002) found that one haplotype was found only in North American birds, from both Manitoba and Quebec. These representatives of *smithsonianus* belonged to a clade of predominately North American species including *L. californicus, L. hyperboreus, L. thayeri*, and *L. glaucoides*, quite distinct from the European clade including *L. argentatus, L. fuscus* , and *L. michalellis*; the two clades are not reciprocally monophyletic groups. Using a nested-clade analysis of the HVR-I segment and the entire cytochrome-*b* gene of mtDNA, Liebers et al. (2004) determined that the ends of the supposed Herring Gull ring species, *L. smithsonianus* and *L. argentatus*, are not each other's closest relatives, and that the two clades had different evolutionary histories. Pons et al. (2005) used these data to construct a phylogeny of the Laridae in which the species *argentatus* and *smithsonianus* are treated as distinct species.

Crochet et al. (2002) cited data from Frings et al. (1958) that European Herring Gulls did not respond to recorded calls of American birds of that species, suggesting significant acoustical differences.

Olsen and Larson (2003) treated *L .smithsonianus* as a distinct species, citing all the above reasons. Olson and Banks (in press) have reviewed the taxonomy and recommend recognition of *L. smithsonianus*.

I recommend that we recognize *Larus smithsonianus* as a species. *Larus argentatus* will move to the Appendix because there are sight records from Canada.

Relative to an English name for the newly recognized species, Olson and Banks state:
"Those who have recognized *Larus smithsonianus* as a species distinct from *L. argentatus* have either used only scientific names (e.g. Crochet et al. 2003) or have used "North American Herring Gull" or "American gull" for the former only as geographic identifiers rather than as proper English names (Dubois1997:315; Jonsson and Mactavish 2001; Pons et al. 2005: 695). Olsen and Larsson (2003), on the other hand, clearly applied the English name "American Herring Gull" to *L. smithsonianus* while retaining the unmodified "Herring Gull" for *L. argentatus*. As noted by Pittaway (2005), without some modifier such as European or Eurasian Herring Gull it would be uncertain whether a writer using simply "Herring Gull"

meant only *L. argentatus* or both Old and New World gulls. But it would now appear to be misleading to call the American bird a herring gull because molecular studies indicate that *L. smithsonianus* is probably more closely related to other species of white-headed gulls than to *L. argentatus*. Therefore, we recommend recognizing the American bird as a full species, *Larus smithsonianus,* and we propose that the English name should be Smithsonian Gull."

I recommend adoption of that English name, which takes into account that the entire original series was in the Smithsonian Institution.

Literature:

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Richard C. Banks
16 July 2007

Recognize *Larus vegae* as a species

Larus vegae of eastern Asia has long been treated as a race of Herring Gull, *L. argentatus*, one of the links of the rassenkreis. It is found casually in western Alaska and British Columbia.

Analysis of mtDNA (Crochet et al. 2002) suggests that vegae should be classified as a species. It shares no cytochrome-b haplotypes with *smithsonianus*, which actually shares them with no other taxon. Crochet et al. (2002) say that "The Siberian taxa *heuglini, vegae, barabensis*, and *mongolicus* are characterized by a lack of original genetic material." I don't know what that means, except that they have no unique haplotypes. Later they say: "Larger samples are thus required for any meaningful interpretation of the genetic data in these Siberian taxa." That is probably why although they treat *vegae* as a species, it does not show up on their small cladogram. However, it is clear that *vegae* is not genetically close to either *argentatus* or *smithsonianus*.

Liebers et al. (2004) have shown that the herring gull ring species of which *vegae* was a link, connecting other Siberian taxa to North American *smithsonianus,* was not really a ring. They state: "What earlier authors . . . regarded as 'the herring gull' turned out to be an assemblage of several disitinct taxa (*argentatus, vegae, smithsonianus*), which are not each other's closest relatives . . . ."

Pons et al. (2005) offered a phylogenetic listing of 53 species the Larine based on mitochondrial markers. The several Siberian taxa formerly considered part of the herring gull ring are not included or mentioned and it is not clear how they would fit. They presumably are all part of the white-headed group.

Olsen and Larsson (2004) recognize *vegae* as a species, although indicating that more research on relationships is needed. They summarize morphological differences from *argentatus* and *smithsonianus*. Probably importantly, *Larus vegae* differs from *smithsonianus* and *argentatus* by having the fleshy eye-ring vermilion red rather than flesh colored. It is darker on the mantle than *smithsonianus.*

I recommend that we recognize *Larus vegae* as a species. This will add a species to our list, where it should precede *smithsonianus*.

The English name Vega Gull is used by Olsen and Larsson (2004), and because the bird is named for the Vega River we should adopt this. However, I am tempted to call it the Veggie Gull because of what I imagine its food habits to be.

References—same as in Proposal 2007-B-01.

Richard C. Banks
18 July 2007

Adopt reclassification of Laridae by Pons et al. (2004), incl. generic limits

Pons et al. (2005) have proposed a phylogeny of the family Laridae based on analyses of mitochondrial DNA. The study covered "all Larids [sic] species (N=53)" and "is based on a combined segment of mtDNA (partial cytochrome *b* and control region)." Their N of 53 species is apparently based on the 51 discussed by Burger and Gochfeld (1992, in HBW 3) plus *michahellis* and *smithsonianus.* Several taxa that might, or probably do, merit recognition as species are not covered by the samples analyzed and are thus not in the classification. Among these are *kamchatkensis/brachyrhynchus* (incl. with *canus*), *mongolicus* and *heuglini* (incl. with *fuscus*), and *vegae* (inc. with *argentatus*).

Among the findings is: the species now called *Larus minutus* and *Rhoodostethia rosea* (Little and Ross's gulls) re closely related and should be merged into one genus, for which the name *Hydrocoloeus* is available; *Xema sabini* and *Pagophila eburnia* are closest relatives but are kept in separate genera; the black-headed gulls and the "hooded" species should be in genera distinct from *Larus*. Placement of many species in the white-headed group differs from present arrangement to show relationships better. Other suggestions do not affect our species.

I recommend adopting this phylogenetic classification, although I have some misgivings. A similar proposal has been submitted to the SACC. I think we cannot afford to wait for the last word in everything, and any small errors can be adjusted later.

My misgivings include the different treatment given to two pairs of species that end up as each other's closest relative, merged in one instance, kept separate in the other. H. minutus and H. roseus "differ in adult plumage but share numerous phenotypic and behavioral similarities which justify a placement in the same genus" while P. eburnea and X. sabini "are maintained in separate genera because of their morphological, ecological, and behavioral differences" none of which is detailed. Further, relationships within some of the other groups are not well settled, and as stated above some "species" are not included.

The classification of North American species would be as follows (next page), from fig. 2 of Pons et al. (2005), a "consensus phylogenetic tree" from three analyses. I have inserted *L. vegae* just before *glaucescens*.; it was not included in the list by Pons et al. (2005). Sequence, especially in the first part of Larus, is subject to revision.

Reference: Pons et al. 2005 is in earlier proposals.

Family Laridae

Genus *Chroicocephalus* Eyton, 1836

Chroicocephalus philadelphia Bonaparte's Gull
Chroicocephalus ridibundus Black-headed Gull
Chroicocephalus cirrocephalus Gray-hooded Gull (A)

Genus *Hydrocoloeus* Kaup, 1829

Hydrocoloeus minutus Little Gull
Hydrocoloeus roseus Ross's Gull

Genus *Pagophila*

Pagophila eburnea Ivory Gull

Genus *Xema*

Xema sabini Sabine's Gull

Genus *Rissa*

Rissa brevirostris Red-legged Kittiwake
Rissa tridactyla Black-legged Kittiwake

Genus *Larus*

Larus michahellis Yellow-legged Gull (A)
Larus argentatus Herring Gull
Larus marinus Great Black-backed Gull
LarusI fuscus Lesser Black-backed Gull (N)
Larus dominicanus Kelp Gull
Larus vegae Vega Gull
Larus glaucescens Glaucous-winged Gull
Larus californicus California Gull
Larus smithsonianus Smithsonian Gull
Larus hyperboreus Glaucous Gull
Larus thayeri Thayer's Gull
Larus glaucoides Iceland Gull
Larus schistasagus Slaty-backed Gull
Larus livens Yellow-footed Gull
Larus occidentalis Western Gull
Larus delawarensis Ring-billed Gull
Larus canus Mew Gull
Larus heermanni Heerman's Gull
Larus crassirostris Black-tailed Gull (A)
Larus belcheri Belcher's Gull (A)

Genus *Leucophaeus* Bruch, 1853

Leucophaeus atricilla Laughing Gull
Leucophaeus pipixcan Franklin's Gull
Leucophaeus modestus Gray Gull (A)

Appendix Species:
Chroicocephalus genei Slender-billed Gull
Chroicocephalus novaehollandiae Silver Gull
Creagrus furcatus Swallow-tailed Gull

Richard C. Banks
20 July 2007

Recognize *Chondrohierax* of Cuba as a species

The Hook-billed Kite, *Chondrohierax uncinatus*, is the sole member of its genus. Two to three named forms occur from Mexico to Argentina, and there are two named insular populations, one on Cuba and one on Grenada. It formerly occurred in Trinidad, as well. On the mainland it is a highly variable species, in plumage and in bill size, but little or none of the variation seems to be geographically oriented. The variation has been thoroughly discussed by Friedmann (1934), who named several subspecies, and by Smith and Temple (1982). Variation in both island populations is reduced relative to the mainland, both in size and coloration. The Cuban population was named as a species by Cassin in 1847, but the Grenada population was not named until Friedmann did so in 1934. Presumably this reflects the degree of difference of these populations as well as the earlier interest in Cuba—and the small number of specimens available from Grenada. The Cuban bird has been recognized either as a species or subspecies over the years. Raffaele et al. (1998) recognize it as a species; Garrido and Kirkconnell (2000) do not, contra Johnson et al. (2007, p. 2)

Johnson et al. (2007) mtDNA (cytochrome *b* and NADH dehydrogenase subunit 2) of 32 individuals from throughout the range of the species, including 4 from Cuba and 6 from Grenada. Relative to the mainland, Cuban birds had a 1.8-2.0% sequence divergence whereas Grenada birds had 0.1-0.3%. Of the haplotypes identified, two were unique to Cuba, one to Grenada, which had none of those from the mainland.

“The two unique haplotypes from Cuba formed a strongly supported clade with high bootstrap and posterior probability (1.00 and 1.00, respectively, Fig. 2), therefore supporting the recognition and taxonomic classification of the Cuban Kite as a distinct species (*C. wilsonii*).” Divergence and isolation are estimated at 400,000-1.25 million years for Cuba, only 20,000-190,000 for Grenada. This is basically all the data presented. Smaller size, a yellow (rather than black) upper mandible, and reduced variability are the only morphological characters mentioned in this study, without detail.

I recommend accepting the conclusion of this paper and recognizing *C. wilsoni* of Cuba as a species, Cuban Kite, leaving the name Hook-billed Kite for *C. uncinatus*.

Discussion.--I put the proposal in the positive (as a motion should be) but I am not sure I would vote for it. All birds in this genus share a unique feeding behavior and derivation, and I don’t think it matters at what level a probably extinct population is ranked. This jpaper gives almost no indication of population differences other than mtDNA haplotypes—but to be fair it would be rehashing

other papers to do so. Overall the paper is poorly written/edited, and done for the conservation rather than the taxonomic result.

Literature Cited

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RAFFAELE, H., J. WILEY, O. GARRIDO, A. KEITH, and J. RAFFAELE. 1998. A guide to the birds of the West Indies. Princeton University Press, Princeton, New Jersey.

Smith, T. B., and S. A. Temple. 1982. Feeding habits and bill polymorphism in Hook-billed Kites. Auk 99:197-207.

Richard C. Banks
25 July 2007