

ON THE NEED FOR A STANDARDIZED NAME FOR BIRDS THAT MIGRATE  
WITHIN SOUTH AMERICA

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Abstract: Bird migration in South America has been documented since the colonial period, although the problem with its denomination remains unresolved. The objectives of this paper are to first review the past and current confusion regarding terminology for birds that do latitudinal migration within South America and second to suggest a simple and general alternative term. Having a general term for a specific migratory system offers: 1) a conceptual basis upon which to create well-defined hypotheses and novel lines of research, 2) a clear, ecologically-meaningful target group of species for conservation and management purposes, and 3) improved communication among researchers and between researchers and lay people through unambiguous definitions. A useful and accurate name for species that do latitudinal migration within South America should be explicit in relation with the biogeographic where it occur, so we propose adopting the term “Neotropical austral migrants” (in Spanish “migrantes australes del Neotrópico” and in Portuguese “migrantes austrais Neotropicais”).

Resumen: La migración de las aves en América de Sur ha sido documentada desde el período colonial, pero su denominación aún permanece sin resolver. Los objetivos de nuestro trabajo son revisar la confusión pasada y actual sobre la manera de denominar a las aves que migran latitudinalmente dentro de América del Sur y sugerir un término alternativo simple y general. Tener una denominación general para un sistema migratorio ofrece: 1) una base conceptual sobre la cual generar hipótesis bien definidas y líneas novedosas de investigación, 2) un grupo claramente identificado de especies ecológicamente relevantes para conservación y manejo, y 3) mejorar la comunicación entre investigadores y con la ciudadanía a través de definiciones sin ambigüedades. Consideramos que una denominación útil y precisa para las aves que migran latitudinalmente dentro de América del Sur debería ser explícita en relación a la región biogeográfica donde se encuentra y por lo tanto proponemos adoptar el término “migrantes australes del Neotrópico” (en portugués “migrantes austrais Neotropicais” y en inglés “Neotropical austral migrants”).

Migratory birds are found on all continents and their movements have intrigued humans throughout history (Berthold 2001), yet our knowledge of how and why they migrate is highly disproportionate across the world’s migratory systems. A case in point is research on bird species that breed in the south-temperate latitudes of South America and migrate north during the non-breeding season, currently

referred to as “austral migrants”. This represents the third largest bird migration system on the planet in terms of number of species and the largest in the Southern Hemisphere (Chesser 1994). To determine the extent to which bird migration in South America remains unexplored, we conducted a literature search of indexed publications using Web of Science (ISI 2005), as well as a general search of books. We found that

between 1985 and 2005, approximately 350 papers were published on Nearctic-Neotropical migrants, whereas only 19 have appeared on “austral” migrants. This discrepancy extends to edited volumes (e.g., Keast and Morton 1980, Hagan and Johnston 1992, Martin and Finch 1995, Greenberg and Marra 2005) and general reviews on migrant birds (e.g., Gauthreaux 1982, Rappole 1995, Newton 2008). This may be in large part due to the fact that the Nearctic-Neotropical and Palearctic-Afrotropical migration systems are geographically more extensive, involve greater migration distances and encompass more taxa than “austral” systems (Chesser 1994, R. T. Chesser pers. comm.). However, we believe the major reason is that Europe and North America are where the natural sciences have traditionally flourished. Thus, current theories on different aspects of migratory behavior (e.g., orientation, navigation, evolution, ecology) are based primarily on studies conducted on the migratory systems of the Northern Hemisphere. An opportunity therefore exists to test the generality of theory originating from research in the Northern Hemisphere by initiating parallel lines of research on other, less-understood migratory systems such as those found in the Southern Hemisphere (Jahn et al. 2006).

Bird migration in the Neotropics has been documented since the colonial period (e.g., Azara 1802-1805), although Zimmer’s (1938) work was the first to bring this migration system to the attention of the international ornithological community. However, the problem with its

etymology remains unresolved. The objectives of this paper are to review the past and current confusion regarding terminology for birds that migrate latitudinally within South America and to suggest an alternative simple and general term. Having a general term for a specific migratory system offers 1) a conceptual basis upon which to create well-defined hypotheses and novel lines of research, 2) a clearly identified, ecologically-relevant group of species for conservation and management purposes, and 3) improved communication among researchers and between researchers and lay people through unambiguous definitions. For example, it is likely that almost any ornithologist will know which migratory system is being referred to when they read a publication on “Nearctic-Neotropical” or “Palearctic-Afrotropical” migration. However, a study on “austral migration” does not explicitly relate to a geographic region: it can refer to migrants that occur in Australia, Africa, Antarctica or South America (Hayes 1995).

In 1994, Douglas Levey proposed leaving behind the use of the term “Neotropical migrants” only for those species which breed north of the Tropic of Cancer and spend the non-breeding season south of that latitude. His objective was to avoid generalizing the results obtained from research on a particular migratory system (the Nearctic-Neotropical system) to other systems in the New World. This aided in distinguishing Nearctic-Neotropical migrants from all other types of migrants, including intratropical migrants, but Levey continued using “Austral migrants” to refer to species migrating

latitudinally within South America. Hayes (1995) clearly highlighted problems with the term “austral migration” and proposed calling birds that migrate within South America “Neotropical migrants”, which remains an overgeneralization, since the Neotropics includes Central America and the Caribbean (Brown and Gibson 1983), a region in which migrants from South America are rare. Chesser (1998, 2005) denominated this group as “South American austral migrants”. Although this name resolves the problem of the geographic location of the system, there persists a disconnect between the terminology and the biogeography. Indeed, names of other migratory systems on the planet do incorporate a biogeographical context.

Joseph (1997) proposed a classification of bird migration in the New World based in a bioclimatic hypothesis. He recognized five migratory subsystems, two of which are found in South America: the “South American Temperate-Tropical” migration subsystem to distinguish those species migrating between temperate and tropical latitudes from those migrating within the south-temperate latitudes, denominated the “South American Cold-Temperate” migration subsystem. This classification scheme is useful for referring to migratory subsystems in North and South America and we therefore promote the use of this classification. However, “austral migrants” continues to be used to describe migratory birds in South America, in literature published in both English (e.g., Chesser 1994, Hayes et al. 1994, Joseph 1996, Stotz et al. 1996, Jahn et al. 2004, Stiles 2004) and Spanish (i.e.,

“migrantes australes”, e.g., Mazar Barnett and Pearman 2001, Di Giacomo 2005).

A useful and accurate name for species migrating latitudinally within South America should be explicit in terms of the geographic region. We therefore propose adopting the term “Neotropical austral migrants” (in Spanish “migrantes australes del Neotrópico” and in Portuguese “migrantes austrais Neotropicais”). This term encompasses species that breed in southern South America (mainly Argentina, southern Brazil, Chile, Paraguay and Uruguay) and that spend the non-breeding season in tropical South America (e.g., Bolivia, Brazil, Colombia, Ecuador, Peru and Venezuela, i.e. South American Temperate-Tropical migration *sensu* Joseph 1997), but also includes those that do not leave the south-temperate latitudes of South America during the winter (e.g., within Argentina; i.e., South American Cold-Temperate migration *sensu* Joseph 1997). There are also species that migrate intratropically in South America (e.g., White-throated Kingbird, *Tyrannus albogularis*; Chesser 1995) or altitudinal movements. As we indicated at the beginning of this paper, our objective was to present a name for birds that migrate latitudinally and for that reason it does not include other types of movements. However, we believe that both intratropical and altitudinal migration do not require specific names, since these types of movement involve shorter distances and are circumscribed within a specific geographic region.

Future research on latitudinal bird migration in South America has the potential to provide a much-needed broader appreciation of the variety of migratory strategies resulting from millions of years of evolution of migration in the New World, as well as an independent litmus test of current and future challenges facing avian life on the planet, such as climate change. A clearer terminology for this migratory system will go a long way to improving migration research in South America.

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#### LITERATURE CITED

- Azara, F. 1802–1805. *Apuntamientos para la historia natural de los pájaros del Paraguay y Río de la Plata*. Imprenta de la Viuda de Ibarra, Madrid, Spain.
- Berthold, P. 2001. *Bird migration: A general survey*. Second edition. Oxford University Press, Oxford, United Kingdom.
- Brown, J. H., and A. C. Gibson. 1983. *Biogeography*. C. V. Mosby, St. Louis, Missouri.
- Chesser, R. T. 1994. Migration in South America: an overview of the austral system. *Bird Conservation International* 4:91-107.
- Chesser, R. T. 1995. *Biogeographic, ecological, and evolutionary aspects of South American austral migration, with special reference to the family Tyrannidae*. Ph.D. diss., Louisiana State Univ.
- Chesser, R. T. 1998. Further perspectives on the breeding distribution of migratory birds: South American austral migrant flycatchers. *Journal of Animal Ecology* 67:69-77.
- Chesser, R. T. 2005. Seasonal distribution and ecology of South American austral migrant flycatchers. Pages 168-181 in *Birds of two worlds* (R. Greenberg and P. P. Marra, Eds.). Johns Hopkins University Press, Baltimore, Maryland.
- Cueto, V. R., J. Lopez de Casenave and L. Marone. 2008. Neotropical austral migrant landbirds: population trends and

- habitat use in the central Monte desert, Argentina. *Condor* 110:70-79.
- Di Giacomo, A. G. 2005. Aves de la Reserva El Bagual. Pp. 201-465 en *Historia natural y paisaje de la Reserva El Bagual, Provincia de Formosa, Argentina. Inventario de la fauna de vertebrados y de la flora vascular de un área protegida del Chaco Húmedo* (A. G. Di Giacomo and S. F. Krapovickas Eds.). Aves Argentinas/Asociación Ornitológica del Plata, Buenos Aires, Argentina.
- Gauthreaux, S. A., Jr. 1982. The ecology and evolution of avian migration systems. Pp. 93-168 en *Avian Biology*, vol. 6 (D. S. Farner and J. R. King Eds.). Academic Press, New York.
- Greenberg, R., and P. P. Marra. 2005. *Birds of two worlds*. Johns Hopkins Press, Baltimore, Maryland.
- Hagan III, J. M., and D. W. Johnston. 1989. *Ecology and conservation of Neotropical migrant landbirds*. Smithsonian Institution Press, Washington, D.C.
- Hayes, F. E. 1995. Definitions for migrant birds: What is a Neotropical migrant? *Auk* 112:521-523.
- Hayes, F. E., P. A. Scharf, and R. S. Ridgely. 1994. Austral bird migrants in Paraguay. *Condor* 96:83-97.
- Jahn, A. E., D. J. Levey, and K. G. Smith. 2004. Reflections across hemispheres: A system-wide approach to New World bird migration. *Auk* 121:1005-1013.
- Jahn, A. E., D. J. Levey, J. E. Johnson, A. M. Mamani, and S. E. Davis. 2006. Towards a mechanistic interpretation of bird migration in South America. *Hornero* 21:99-108.
- Joseph, L. 1996. Preliminary climatic overview of migration patterns in South American austral migrant passerines. *Ecotropica* 2:185-193.
- Joseph, L. 1997. Towards a broader view of neotropical migrants: consequences of a re-examination of austral migration. *Ornitología Neotropical* 8:31-36.
- Keast, A., and E. S. Morton. 1980. *Migrant birds in the Neotropics: Ecology, behavior, distribution, and conservation*. Smithsonian Institution Press, Washington, D.C.
- Levey, D. J. 1994. Why we should adopt a broader view of Neotropical migrants. *Auk* 111:233-236.
- Martin, T. E., and D. M. Finch. 1995. *Ecology and management of Neotropical migratory birds: A synthesis and review of critical issues*. Oxford University Press, New York.
- Mazar Barnett, J., and M. Pearman. 2001. *Lista comentada de las aves argentinas*. Lynx Edicions, Barcelona, Spain.
- Newton, I. 2008. *The migration ecology of birds*. Academic Press, London
- Rappole, J. H. 1995. The ecology of migrant birds, a Neotropical perspective.

Smithsonian Institution Press,  
Washington, D.C.

Stiles, F. G. 2004. Austral migration in Colombia:

The state of knowledge, and suggestions  
for action. *Ornitología Neotropical*  
15:349-355.

Stotz, D. F., F. W. Fitzpatrick, T. A. Parker III,  
and D. K. Moskovits. 1996. *Neotropical  
birds: Ecology and conservation*. University of  
Chicago Press, Chicago.

Zimmer, J. T. 1938. Notes on migrations of  
South American birds. *Auk* 55:405-410.