



BIOLOGICAL CONSERVATION NEWSLETTER

**Plant Conservation Unit
Department of Botany**

No. 254

<http://ravenel.si.edu/bcn>

February 2006

NEW BIRD SPECIES DISCOVERED IN SUB-HIMALAYAN MYANMAR

The National Zoo's John Rappole, along with scientists Swen Renner from the University of Goettingen, Germany, Nay Myo Shwe from the Myanmar Wildlife Division and Paul Sweet from the American Museum of Natural History, discovered a new species of scimitar-babbler (Family Timaliidae) during an expedition to sub-Himalayan Myanmar.

Sponsored by the Smithsonian National Museum of Natural History, Bird Division (Alexander Wetmore Fund), the Smithsonian Research Opportunities Fund, and the Myanmar Wildlife Division, members of the expedition trekked into the remote and roadless area along the Myanmar border with Tibet to the village of Naung Mung, where they established a base camp for inventorying the poorly-known bird species of the region during February of 2004.



Naung Mung Scimitar-Babbler
(*Jabouilleia naungmungensis*).
Credit: *The Auk*.

The first specimen of the new species, a female, was captured in a mist net in temperate rainforest habitat on 6 February 2004. Two additional specimens, also females, were captured on 6 and 8 February, respectively. A description of the species appears in the October 2005 issue of *The Auk, Journal of the America Ornithologists' Union*, where the new bird is designated as the Naung Mung Scimitar-Babbler (*Jabouilleia naungmungensis*) after the locality where it was captured. The only known relative of this new species is the Short-tailed Scimitar-Babbler (*Jabouilleia danjoui*) from Vietnam and Laos.

This discovery further documents the region's remarkable biodiversity, and has powerful implications for the conservation value of the area, which is presently unprotected. "Within the past decade, scientists have discovered a new species of deer, a new monkey, and several new species of plants, amphibians, and reptiles in this region" says Rappole. "No other part of the world of which I am aware presents this combination of extraordinary richness and relative lack of scientific knowledge."

INFORMATION HIGHWAY HI-LITES

The Smithsonian Institution's ***North American Mammals*** <<http://www.mnh2.si.edu/education/mna/>> is a rather dynamic and lively Web-based searchable database of the approximately 400 living mammals of North America. Much of the material on the site is based on *The Smithsonian Book of North American Mammals* by Don E. Wilson and Sue Ruff. New visitors will definitely want to begin by perusing the "About the Site" area as it provides some basic information about how to best utilize the ways to search the database. In brief, the database may be searched by species, geographic location, conservation status, and family tree. For each mammal, visitors can view several renderings and photographs and also read a short scientific and narrative description. A particularly novel feature is that for many of the mammals visitors can listen to a sound clip of each in its natural habitat. Another feature that is quite helpful is that visitors can create their own printable field guides by merely clicking a box next to each mammal's scientific name, and then proceed to print these materials out as they wish.

- from the NSDL Scout Report for the Life Sciences
Copyright Internet Scout Project 1994-2005.
<http://scout.cs.wisc.edu/>

In keeping with its interest in wildlife conservation, the World Wildlife Fund has created the ***WildFinder*** database <<http://www.worldwildlife.org/wildfinder/>>, which allows users to find out where various species live around

the world. The information in the database is based on WWF's 825 terrestrial ecoregions and currently includes information for four large taxa: birds, reptiles, mammals, and amphibians. The appeal of such a database is rather broad, and extends to groups such as teachers, conservationists, and the general public. Visitors can begin by searching by country, US ZIP code, or city. They can also use the various interactive tools (such as the pan or zoom features) to take a closer look at any given area. Users of the site's database can also search by species name and also view a map gallery that contains some pre-selected themes, such as the richness of mammal species or reptiles species as distributed across the world.

- from the NSDL Scout Report for the Life Sciences

CURRENT LITERATURE

- Allombert, S., Stockton, S., and Martin, J.L. 2005. A natural experiment on the impact of overabundant deer on forest invertebrates. *Conserv. Biol.* 19(6):1917-1929.
- Altrichter, M. 2005. The sustainability of subsistence hunting of peccaries in the Argentine Chaco. *Biol. Conserv.* 126(3): 351-362.
- Andersen, D.E., DeStefano, S., Goldstein, M.I., Titus, K., Crocker-Bedford, C., Keane, J.J., Anthony, R.G., and Rosenfield, R.N. 2005. Technical review of the status of northern goshawks in the western United States. *J. Raptor Res.* 39(3): 192-209.
- Anderson, D.M., Salick, J., Moseley, R.K., and Ou, X.K. 2005. Conserving the sacred Medicine Mountains: a vegetation analysis of Tibetan sacred sites in northwest Yunnan. *Biodivers. Conserv.* 14(13):3065-3091.
- Anderson, L.W.J. 2005. California's reaction to *Caulerpa taxifolia*: a model for invasive species rapid response. *Biol. Invasions* 7(6):1003-1016.
- Andreone, F., Cadle, J.E., Cox, N., Glaw, F., Nussbaum, R.A., Raxworthy, C.J., Stuart, S.N., Vallan, D., and Vences, M. 2005. Species review of amphibian extinction risks in Madagascar: conclusions from the global amphibian assessment. *Conserv. Biol.* 19(6):1790-1802.
- Arponen, A., Heikkilä, R.K., Thomas, C.D., and Moilanen, A. 2005. The value of biodiversity in reserve selection: representation, species weighting, and benefit functions. *Conserv. Biol.* 19(6):2009-2014.
- Arzate-Fernández, A.M., Miwa, M., Shimada, T., Yonekura, T., and Ogawa, K. 2005. Genetic diversity of Miyamasukashiyuri (*Lilium maculatum* Thunb. var. *bukasanense*), an endemic and endangered species at Mount Buko, Saitama, Japan. *Plant Species Biol.* 20(1):57-65.
- Baker, G.B., and Wise, B.S. 2005. The impact of pelagic longline fishing on the flesh-footed shearwater *Puffinus carneipes* in Eastern Australia. *Biol. Conserv.* 126(3):306-316.
- Ball, L.C., Doherty, P.F., and McDonald, M.W. 2005. An occupancy modeling approach to evaluating a Palm Springs ground squirrel habitat model. *J. Wildlife Manag.* 69(3):894-904.
- Bauer, G.B. 2005. Research training for releasable animals. *Conserv. Biol.* 19(6):1779-1789.
- Beale, C.M., and Monaghan, P. 2005. Modeling the effects of limiting the number of visitors on failure rates of seabird nests. *Conserv. Biol.* 19(6):2015-2019.
- Beebee, T.J.C. 2005. Conservation genetics of amphibians. *Heredity* 95(6):423-427.
- Bhagwat, S.A., Kushalappa, C.G., Williams, P.H., and Brown, N.D. 2005. Landscape approach to biodiversity conservation of sacred groves in the Western Ghats of India. *Conserv. Biol.* 19(6):1853-1862.
- Biggs, J., Williams, P., Whitfield, M., Nicolet, P., and Weatherby, A. 2005. 15 years of pond assessment in Britain: results and lessons learned from the work of pond conservation. *Aquat. Conserv.* 15(6):693-714.
- Blanco-García, A., and Lindig-Cisneros, R. 2005. Incorporating restoration in sustainable forestry management: using pine-bark mulch to improve native species establishment on tephra deposits. *Restor. Ecol.* 13(4):703-709.
- Blundell, A.G., and Mascia, M.B. 2005. Discrepancies in reported levels of international wildlife trade. *Conserv. Biol.* 19(6):2020-2025.
- Bobeldyk, A.M., Bossenbroek, J.M., Evans-White, M.A., Lodge, D.M., and Lamberti, G.A. 2005. Secondary spread of zebra mussels (*Dreissena polymorpha*) in coupled lake-stream systems. *Ecoscience* 12(3):339-346.
- Boulton, A.J., Panizzon, D., and Prior, J. 2005. Explicit knowledge structures as a tool for overcoming obstacles to interdisciplinary research. *Conserv. Biol.* 19(6):2026-2029.
- Boyce, M.S., Lele, S.R., and Johns, B.W. 2005. Whooping crane recruitment enhanced by egg removal. *Biol. Conserv.* 126(3): 395-401.
- Brewer, J.S. 2005. The lack of favorable responses of an endangered pitcher plant to habitat restoration. *Restor. Ecol.* 13(4):710-717.
- Briers, R.A., and Biggs, J. 2005. Spatial patterns in pond invertebrate communities: separating environmental and distance effects. *Aquat. Conserv.* 15(6):549-557.
- Briggs, J.C. 2005. Coral reefs: conserving the evolutionary sources. *Biol. Conserv.* 126(3):297-305.
- Buhay, J.E., and Crandall, K.A. 2005. Subterranean phylogeography of freshwater crayfishes shows extensive gene flow and surprisingly large population sizes. *Mol. Ecol.* 14(14): 4259-4273.
- Bullock, W.L., and Samways, M.J. 2005. Conservation of flower-arthropod associations in remnant African grassland corridors in an afforested pine mosaic. *Biodivers. Conserv.* 14(13): 3093-3103.
- Byers, J.E. 2005. Quantifying geographic variation in physiological performance to address the absence of invading species. *Ecoscience* 12(3):358-365.
- Cabeza, M., Hottola, J., Meyke, E., and Penna, M.A.H. 2005. Extending the benefits of attending a conference abroad. *Conserv. Biol.* 19(6):1683.
- Carchini, G., Solimini, A.G., and Ruggiero, A. 2005. Habitat

- characteristics and odonate diversity in mountain ponds of central Italy. *Aquat. Conserv.* 15(6):573-581.
- Caro, T., Eadie, J., and Sih, A. 2005. Use of substitute species in conservation biology. *Conserv. Biol.* 19(6):1821-1826.
- Cayrou, J., and Cérégino, R. 2005. Life-cycle phenology of some aquatic insects: implications for pond conservation. *Aquat. Conserv.* 15(6):559-571.
- Cho, H.J., and Poirier, M.A. 2005. A model to estimate potential submersed aquatic vegetation habitat based on studies in Lake Pontchartrain, Louisiana. *Restor. Ecol.* 13(4):623-629.
- Chung, M.Y., Nason, J.D., and Chung, M.G. 2005. Patterns of hybridization and population genetic structure in the terrestrial orchids *Liparis kumokiri* and *Liparis makinoana* (Orchidaceae) in sympatric populations. *Mol. Ecol.* 14(14):4389-4402.
- Cinner, J.E., Marnane, M.J., and McClanahan, T.R. 2005. Conservation and community benefits from traditional coral reef management at Ahus Island, Papua New Guinea. *Conserv. Biol.* 19(6):1714-1723.
- Civille, J.C., Sayce, K., Smith, S.D., and Strong, D.R. 2005. Reconstructing a century of *Spartina alterniflora* invasion with historical records and contemporary remote sensing. *Ecoscience* 12(3):330-338.
- Cockle, K.L., Leonard, M.L., and Bodrati, A.A. 2005. Presence and abundance of birds in an Atlantic forest reserve and adjacent plantation of shade-grown yerba mate, in Paraguay. *Biodivers. Conserv.* 14(13):3265-3288.
- Cohen, A.N., Harris, L.H., Bingham, B.L., Carlton, J.T., Chapman, J.W., Lambert, C.C., Lambert, G., Ljubenkov, J.C., Murray, S.N., Rao, L.C., Reardon, K., and Schwindt, E. 2005. Rapid assessment survey for exotic organisms in southern California bays and harbors, and abundance in port and non-port areas. *Biol. Invasions* 7(6):995-1002.
- Conklin, E.J., and Smith, J.E. 2005. Abundance and spread of the invasive red algae, *Kappaphycus* spp., in Kane'ohe Bay, Hawai'i and an experimental assessment of management options. *Biol. Invasions* 7(6):1029-1039.
- Cornish, P.S., and Burgin, S. 2005. Residual effects of glyphosate herbicide in ecological restoration. *Restor. Ecol.* 13(4):695-702.
- Crooks, J.A. 2005. Lag times and exotic species: the ecology and management of biological invasions in slow-motion. *Ecoscience* 12(3):316-329.
- Currie, D., Bristol, R., Millett, J., and Shah, N.J. 2005. Demography of the Seychelles black paradise-flycatcher: considerations for conservation and reintroduction. *Ostrich* 76(3-4): 104-110.
- Dattilo, A.J., and Rhoades, C.C. 2005. Establishment of the woody grass *Arundinaria gigantea* for riparian restoration. *Restor. Ecol.* 13(4):616-622.
- Davis, G.E. 2005. Science and society: marine reserve design for the California Channel Islands. *Conserv. Biol.* 19(6):1745-1751.
- de Lucas, M., Janss, G.F.E., and Ferrer, M. 2005. A bird and small mammal BACI and IG design studies in a wind farm in Malpica (Spain). *Biodivers. Conserv.* 14(13):3289-3303.
- De Meester, L., Declerck, S., Stoks, R., Louette, G., Van de Meutter, F., De Bie, T., Michels, E., and Brendonck, L. 2005. Ponds and pools as model systems in conservation biology, ecology and evolutionary biology. *Aquat. Conserv.* 15(6):715-725.
- Della Bella, V., Bazzanti, M., and Chiarotti, F. 2005. Macro-invertebrate diversity and conservation status of Mediterranean ponds in Italy: water permanence and mesohabitat influence. *Aquat. Conserv.* 15(6):583-600.
- Deng, W.H., and Gao, W. 2005. Edge effects on nesting success of cavity-nesting birds in fragmented forests. *Biol. Conserv.* 126(3):363-370.
- DeStefano, S. 2005. A review of the status and distribution of northern goshawks in New England. *J. Raptor Res.* 39(3): 342-350.
- Devin, S., Bollache, L., Noel, P.Y., and Beisel, J.N. 2005. Patterns of biological invasions in french freshwater systems by non-indigenous macroinvertebrates. *Hydrobiologia* 551:137-146.
- DeWalt, R.E., Favret, C., and Webb, D.W. 2005. Just how imperiled are aquatic insects? A case study of stoneflies (Plecoptera) in Illinois. *Ann. Entomol. Soc. Amer.* 98(6):941-950.
- Dong, Y.H., Gituru, R.W., Chen, J.M., and Wang, Q.F. 2005. Effect of habitat modification on the distribution of the endangered aquatic fern *Ceratopteris thalictroides* (Parkeriaceae) in China. *J. Freshwater Ecol.* 20(4):689-693.
- Drake, L.A., Meyer, A.E., Forsberg, R.L., Baier, R.E., Doblin, M.A., Heinemann, S., Johnson, W.P., Koch, M., Rublee, P.A., and Dobbs, F.C. 2005. Potential invasion of microorganisms and pathogens via 'interior hull fouling': biofilms inside ballast water tanks. *Biol. Invasions* 7(6):969-982.
- Ellison, A.M., Bank, M.S., Clinton, B.D., Colburn, E.A., Elliott, K., Ford, C.R., Foster, D.R., Kloeppe, B.D., Knoepp, J.D., Lovett, G.M., Mohan, J., Orwig, D.A., Rodenhouse, N.L., Sobczak, W.V., Stinson, K.A., Stone, J.K., Swan, C.M., Thompson, J., Von Holle, B., and Webster, J.R. 2005. Loss of foundation species: consequences for the structure and dynamics of forested ecosystems. *Front. Ecol. Environ.* 3(9): 479-486.
- Er, K.B.H., Innes, J.L., Martin, K., and Klinkenberg, B. 2005. Forest loss with urbanization predicts bird extirpations in Vancouver. *Biol. Conserv.* 126(3):410-419.
- Fagan, W.F., Kennedy, C.M., and Unmack, P.J. 2005. Quantifying rarity, losses, and risks for native fishes of the lower Colorado River basin: implications for conservation listing. *Conserv. Biol.* 19(6):1872-1882.
- Fernandes, L., Day, J., Lewis, A., Slegers, S., Kerrigan, B., Breen, D., Cameron, D., Jago, B., Hall, J., Lowe, D., Innes, J., Tanzer, J., Chadwick, V., Thompson, L., Gorman, K., Simmons, M., Barnett, B., Sampson, K., De'ath, G., Mapstone, B., Marsh, H., Possingham, H., Ball, I., Ward, T., Dobbs, K., Aumend, J., Slater, D., and Stapleton, K. 2005. Establishing representative no-take areas in the Great Barrier Reef: large-scale implementation of theory on marine protected areas. *Conserv. Biol.* 19(6):1733-1744.
- Fernández, J.M., Selma, M.A.E., Aymerich, F.R., Sáez, M.T.P., and Fructuoso, M.F.C. 2005. Aquatic birds as bioindicators of trophic changes and ecosystem deterioration in the Mar Menor lagoon (SE Spain). *Hydrobiologia* 550:221-235.

- Fernández, M., and Castilla, J.C. 2005. Marine conservation in Chile: historical perspective, lessons, and challenges. *Conserv. Biol.* 19(6):1752-1762.
- Gao, L.Z. 2005. Microsatellite variation within and among populations of *Oryza officinalis* (Poaceae), an endangered wild rice from China. *Mol. Ecol.* 14(14):4287-4297.
- Gao, L.Z., Hong, D.Y., and Ge, S. 2005. Patterns of allozyme variation at two stages of the life history in wild rice *Oryza rufipogon* and conservation genetic implications. *Biodivers. Conserv.* 14(12):2821-2834.
- Gasparini, J.L., Floeter, S.R., Ferreira, C.E.L., and Sazima, I. 2005. Marine ornamental trade in Brazil. *Biodivers. Conserv.* 14(12):2883-2899.
- Geleta, N., and Labuschagne, M.T. 2005. Qualitative traits variation in sorghum (*Sorghum bicolor* (L.) Moench) germplasm from eastern highlands of Ethiopia. *Biodivers. Conserv.* 14(13):3055-3064.
- Gilna, B., Lindenmayer, D.B., and Viggers, K.L. 2005. Dangers of New Zealand possum biocontrol research to endogenous Australian fauna. *Conserv. Biol.* 19(6):2030-2032.
- Gippoliti, S. 2005. Historical museology meets tropical biodiversity conservation. *Biodivers. Conserv.* 14(13):3127-3134.
- Gladstone, W., and Alexander, T. 2005. A test of the higher-taxon approach in the identification of candidate sites for marine reserves. *Biodivers. Conserv.* 14(13):3151-3168.
- Goddard, J.H.R., Torchin, M.E., Kuris, A.M., and Lafferty, K.D. 2005. Host specificity of *Sacculina carcini*, a potential biological control agent of introduced European green crab *Carcinus maenas* in California. *Biol. Invasions* 7(6):895-912.
- Gottdenker, N.L., Walsh, T., Vargas, H., Merkel, J., Jiménez, G.U., Miller, R.E., Dailey, M., and Parker, P.G. 2005. Assessing the risks of introduced chickens and their pathogens to native birds in the Galápagos Archipelago. *Biol. Conserv.* 126(3):429-439.
- Gove, A.D., Majer, J.D., and Rico-Gray, V. 2005. Methods for conservation outside of formal reserve systems: the case of ants in the seasonally dry tropics of Veracruz, Mexico. *Biol. Conserv.* 126(3):328-338.
- Granek, E.F., and Brown, M.A. 2005. Co-management approach to marine conservation in Moheli, Comoros Islands. *Conserv. Biol.* 19(6):1724-1732.
- Grapputo, A., Boman, S., Lindstrom, L., Lyytinen, A., and Mappes, J. 2005. The voyage of an invasive species across continents: genetic diversity of North American and European Colorado potato beetle populations. *Mol. Ecol.* 14(14):4207-4219.
- Green, D.M. 2005. Designatable units for status assessment of endangered species. *Conserv. Biol.* 19(6):1813-1820.
- Halofsky, J.E., and McCormick, L.H. 2005. Effects of unseeded areas on species richness of coal mines reclaimed with municipal biosolids. *Restor. Ecol.* 13(4):630-638.
- Harris, G.M., Jenkins, C.N., and Pimm, S.L. 2005. Refining biodiversity conservation priorities. *Conserv. Biol.* 19(6):1957-1968.
- Harris, L.G., and Jones, A.C. 2005. Temperature, herbivory and epibiont acquisition as factors controlling the distribution and ecological role of an invasive seaweed. *Biol. Invasions* 7(6): 913-924.
- Harwood, W., and Mac Nally, R. 2005. Geometry of large woodland remnants and its influence on avifaunal distributions. *Landscape Ecol.* 20(4):401-416.
- Hatten, J.R., Averill-Murray, A., and van Pelt, W.E. 2005. A spatial model of potential jaguar habitat in Arizona. *J. Wildlife Manag.* 69(3):1024-1033.
- Havel, J.E., Shurin, J.B., and Jones, J.R. 2005. Environmental limits to a rapidly spreading exotic cladoceran. *Ecoscience* 12(3):376-385.
- Henderson, D. 2005. Evangelicals are conservationists. *Conserv. Biol.* 19(6):1687-1688.
- Herborg, L.M., Rushton, S.P., Clare, A.S., and Bentley, M.G. 2005. The invasion of the Chinese mitten crab (*Eriocheir sinensis*) in the United Kingdom and its comparison to continental Europe. *Biol. Invasions* 7(6):959-968.
- Hero, J.M., Williams, S.E., and Magnusson, W.E. 2005. Ecological traits of declining amphibians in upland areas of eastern Australia. *J. Zool.* 267:221-232.
- Herrera, R., Arias, M., Moya-Leon, M., Penailillo, P., Wilkinson, M., and Caligari, P. 2005. Genetic variation in a Chilean endangered endemic: *Gomortega keule* (Molina) Baillon. *Biodivers. Conserv.* 14(12):2871-2881.
- Heylen, O., Hermy, M., and Schrevens, E. 2005. Determinants of cryptogamic epiphyte diversity in a river valley (Flanders). *Biol. Conserv.* 126(3):371-382.
- Holderegger, R., Angelone, S., Brodbeck, S., Csencsics, D., Guerli, F., Hoebee, S., and Finkeldey, R. 2005. Application of genetic markers to the discrimination of European black poplar (*Populus nigra*) from American black poplar (*P. deltoides*) and hybrid poplars (*P. x canadensis*) in Switzerland. *Trees-Struct. Funct.* 19(6):742-747.
- Holmes, N., Giese, M., and Kriwoken, L.K. 2005. Testing the minimum approach distance guidelines for incubating royal penguins *Eudyptes schlegeli*. *Biol. Conserv.* 126(3):339-350.
- Hortal, J., and Lobo, J.M. 2005. An ED-based protocol for optimal sampling of biodiversity. *Biodivers. Conserv.* 14(12): 2913-2947.
- Huang, C.F., Lin, Y.H., and Chen, J.D. 2005. The use of RAPD markers to assess catfish hybridization. *Biodivers. Conserv.* 14(12):3003-3014.
- Hudon, C., Gagnon, P., and Jean, M. 2005. Hydrological factors controlling the spread of common reed (*Phragmites australis*) in the St. Lawrence River (Quebec, Canada). *Ecoscience* 12(3):347-357.
- Jeffries, M. 2005. Small ponds and big landscapes: the challenge of invertebrate spatial and temporal dynamics for European pond conservation. *Aquat. Conserv.* 15(6):541-547.
- Jenkins, A.R., and van Zyl, A.J. 2005. Conservation status and community structure of cliff-nesting raptors and ravens on the Cape Peninsula, South Africa. *Ostrich* 76(3-4):175-184.
- Jepsen, J.U., Madsen, A.B., Karlsson, M., and Groth, D. 2005. Predicting distribution and density of European badger (*Meles meles*) sets in Denmark. *Biodivers. Conserv.* 14(13):3235-3253.
- Jia, F., Wang, N., and Zheng, G.M. 2005. Winter habitat requirements of white eared-pheasant *Crossoptilon crossoptilon* and

- blood pheasant *Ithaginis cruentus* in south-west China. *Bird Conserv. Int.* 15(3):303-312.
- Jiguet, F., Julliard, R., Couvet, D., and Petiau, A. 2005. Modeling spatial trends in estimated species richness using breeding bird survey data: a valuable tool in biodiversity assessment. *Biodivers. Conserv.* 14(13):3305-3324.
- Johns, D. 2005. The other connectivity: reaching beyond the choir. *Conserv. Biol.* 19(6):1681-1682.
- Johns, D.M. 2005. Orr and Armageddon: building a coalition. *Conserv. Biol.* 19(6):1685-1686.
- Johnson, C.J., Boyce, M.S., Case, R.L., Cluff, H.D., Gau, R.J., Gunn, A., and Mulders, R. 2005. Cumulative effects of human developments on Arctic wildlife. *Wildlife Monogr.* 160:1-36.
- Jones, J.P.G., Andriahajaina, F.B., Hockley, N.J., Balmford, A., and Ravoahangimalala, O.R. 2005. A multidisciplinary approach to assessing the sustainability of freshwater crayfish harvesting in Madagascar. *Conserv. Biol.* 19(6):1863-1871.
- Jørgensen, L.L. 2005. Impact scenario for an introduced decapod on arctic epibenthic communities. *Biol. Invasions* 7(6): 949-957.
- Kang, M., Ye, Q.G., and Huang, H.W. 2005. Genetic consequence of restricted habitat and population decline in endangered *Isoetes sinensis* (Isoetaceae). *Ann. Botany* 96(7):1265-1274.
- Kardol, P., Bezemer, T.M., van der Wal, A., and van der Putten, W.H. 2005. Successional trajectories of soil nematode and plant communities in a chronosequence of ex-arable lands. *Biol. Conserv.* 126(3):317-327.
- Keller, V., Zbinden, N., Schmid, H., and Volet, B. 2005. A case study in applying the IUCN regional guidelines for national red lists and justifications for their modification. *Conserv. Biol.* 19(6):1827-1834.
- Kerby, J.L., Riley, S.P.D., Kats, L.B., and Wilson, P. 2005. Barriers and flow as limiting factors in the spread of an invasive crayfish (*Procambarus clarkii*) in southern California streams. *Biol. Conserv.* 126(3):402-409.
- Koel, T.M., Bigelow, P.E., Doepke, P.D., Ertel, B.D., and Mahony, D.L. 2005. Nonnative lake trout result in Yellowstone cutthroat trout decline and impacts to bears and anglers. *Fisheries* 30(11):10-19.
- Lai, B.C.G., and Pullin, A.S. 2005. Distribution and conservation of genetic diversity among UK calcareous grassland regions: a case study using insects. *Biodivers. Conserv.* 14(13): 3105-3125.
- Langlois, T.J., and Ballantine, W.J. 2005. Marine ecological research in New Zealand: developing predictive models through the study of no-take marine reserves. *Conserv. Biol.* 19(6):1763-1770.
- Larson, B.M.H. 2005. The war of the roses: demilitarizing invasion biology. *Front. Ecol. Environ.* 3(9):495-500.
- Lavoie, C., Dufresne, C., and Delisle, F. 2005. The spread of reed canarygrass (*Phalaris arundinacea*) in Quebec: a spatio-temporal perspective. *Ecoscience* 12(3):366-375.
- Leslie, H.M. 2005. Synthesis of marine conservation planning approaches. *Conserv. Biol.* 19(6):1701-1713.
- Lindhe, A., Lindelöw, Å., and Åsenblad, N. 2005. Saproxylic beetles in standing dead wood density in relation to substrate sun-exposure and diameter. *Biodivers. Conserv.* 14(12):3033-3053.
- Lovett, J.C., Midgley, G.F., and Barnard, P. 2005. Climate change and ecology in Africa. *Afr. J. Ecol.* 43(3):167-169.
- Luken, J.O. 2005. *Dionaea muscipula* (Venus flytrap) establishment, release, and response of associated species in mowed patches on the rims of Carolina bays. *Restor. Ecol.* 13(4):678-684.
- Lundquist, C.J., and Granek, E.F. 2005. Strategies for successful marine conservation: integrating socioeconomic, political, and scientific factors. *Conserv. Biol.* 19(6):1771-1778.
- Lundquist, C.J., Granek, E.F., and Bustamante, R.H. 2005. Special Section: implementation and management of marine protected areas - introduction. *Conserv. Biol.* 19(6):1699-1700.
- Maeda-Martinez, A.M., Obregón-Barboza, H., Prieto-Salazar, M.A., and García-Velazco, H. 2005. Two new fairy shrimp of the genus *Streptocephalus* (Branchiopoda: Anostraca) from North America. *J. Crustacean Biol.* 25(4):537-546.
- Maeda-Martinez, A.M., Rogers, D.C., and Worthington, R.D. 2005. First records of the fairy shrimp *Streptocephalus moorei* (Branchiopoda: Anostraca) from the United States. *J. Crustacean Biol.* 25(4):547-550.
- Maerz, J.C., Blossey, B., and Nuzzo, V. 2005. Green frogs show reduced foraging success in habitats invaded by Japanese knotweed. *Biodivers. Conserv.* 14(12):2901-2911.
- Maheu-Giroux, M., and de Blois, S. 2005. Mapping the invasive species *Phragmites australis* in linear wetland corridors. *Aquat. Bot.* 83(4):310-320.
- Manton, M.G., Angelstam, P., and Mikusinski, G. 2005. Modelling habitat suitability for deciduous forest focal species - a sensitivity analysis using different satellite land cover data. *Landscape Ecol.* 20(7):827-839.
- Manu, S., Peach, W., Bowden, C., and Cresswell, W. 2005. The effects of forest fragmentation on the population density and distribution of the globally endangered Ibadan malimbe *Malimbus ibadanensis* and other malimbe species. *Bird Conserv. Int.* 15(3):275-285.
- Marage, D., Garraud, L., and Rameau, J.C. 2005. A basic and applied approach to evaluate natural heritage conservation and management: example based on wild flora heritage in the Petit-Buech watershed (Hautes-Alpes, France). *Rev. Ecol. -Terre Vie* 60(3):193-209.
- Marsden, S.J., Whiffin, M., Galetti, M., and Fielding, A.H. 2005. How well will Brazil's system of Atlantic forest reserves maintain viable bird populations? *Biodivers. Conserv.* 14(12): 2835-2853.
- Marsh, D.M., Milam, G.S., Gorham, N.R., and Beckman, N.G. 2005. Forest roads as partial barriers to terrestrial salamander movement. *Conserv. Biol.* 19(6):2004-2008.
- Martin, R.A. 2005. Conservation of freshwater and euryhaline elasmobranchs: a review. *J. Mar. Biol. Assoc. UK* 85(5):1049-1073.
- Mattison, E.H.A., and Norris, K. 2005. Bridging the gaps between agricultural policy, land-use and biodiversity. *TREE* 20(11):610-616.
- Meffe, G.K. 2005. Conservation in context. *Conserv. Biol.* 19(6): 1685.

- Mehlman, D.W., Mabey, S.E., Ewert, D.N., Duncan, C., Abel, B., Cimprich, D., Sutter, R.D., and Woodrey, M. 2005. Conserving stopover sites for forest-dwelling migratory landbirds. *Auk* 122(4):1281-1290.
- Menetrey, N., Sager, L., Oertli, B., and Lachavanne, J.B. 2005. Looking for metrics to assess the trophic state of ponds. Macroinvertebrates and amphibians. *Aquat. Conserv.* 15(6): 653-664.
- Minter, B.A., and Collins, J.P. 2005. Ecological ethics: building a new tool kit for ecologists and biodiversity managers. *Conserv. Biol.* 19(6):1803-1812.
- Morales, M.B., Bretagnolle, V., and Arroyo, B. 2005. Viability of the endangered little bustard *Tetrax tetrax* population of western France. *Biodivers. Conserv.* 14(13):3135-3150.
- Moritz, R.F.A., Härtel, S., and Neumann, P. 2005. Global invasions of the western honeybee (*Apis mellifera*) and the consequences for biodiversity. *Ecoscience* 12(3):289-301.
- Moyes, A.B., Witter, M.S., and Gamon, J.A. 2005. Restoration of native perennials in a California annual grassland after prescribed spring burning and solarization. *Restor. Ecol.* 13(4):659-666.
- Murphy, S.D. 2005. Concurrent management of an exotic species and initial restoration efforts in forests. *Restor. Ecol.* 13(4):584-593.
- Muthusamy, J., Staines, H.J., Benson, E.E., Mansor, M., and Krishnapillay, B. 2005. Investigating the use of fractional replication and Taguchi techniques in cryopreservation: a case study using orthodox seeds of a tropical rainforest tree species. *Biodivers. Conserv.* 14(13):3169-3185.
- Nagler, P.L., Hinojosa-Huerta, O., Glenn, E.P., Garcia-Hernandez, J., Romo, R., Curtis, C., Huete, A.R., and Nelson, S.G. 2005. Regeneration of native trees in the presence of invasive saltcedar in the Colorado River delta, Mexico. *Conserv. Biol.* 19(6):1842-1852.
- Nichols, R.K., Woolaver, L.G., and Jones, C.G. 2005. Low productivity in the critically endangered Mauritius olive white-eye *Zosterops chloronothos*. *Bird Conserv. Int.* 15(3):297-302.
- Oertli, B., Biggs, J., Cérégino, R., Grillas, P., Joly, P., and Lachavanne, J.B. 2005. Conservation and monitoring of pond biodiversity: introduction. *Aquat. Conserv.* 15(6):535-540.
- Oertli, B., Joye, D.A., Castella, E., Juge, R., Lehmann, A., and Lachavanne, J.B. 2005. PLOCH: a standardized method for sampling and assessing the biodiversity in ponds. *Aquat. Conserv.* 15(6):665-679.
- Olden, J.D., Douglas, M.E., and Douglas, M.R. 2005. The human dimensions of biotic homogenization. *Conserv. Biol.* 19(6):2036-2038.
- Orr, D.W. 2005. Between Heaven and Earth - evangelical engagement in conservation - a response. *Conserv. Biol.* 19(6): 1697-1698.
- Page, H.N., and Bork, E.W. 2005. Effect of planting season, bunchgrass species, and neighbor control on the success of transplants for grassland restoration. *Restor. Ecol.* 13(4):651-658.
- Pakeman, R.J., Small, J.L., Le Duc, M.G., and Marrs, R.H. 2005. Recovery of moorland vegetation after aerial spraying of bracken (*Pteridium aquilinum* (L.) Kuhn) with asulam. *Restor. Ecol.* 13(4):718-724.
- Palmer, M.W. 2005. Temporal trends of exotic species richness in North American floras: an overview. *Ecoscience* 12(3):386-390.
- Patil, J.G., Gunasekera, R.M., Deagle, B.E., Bax, N.J., and Blackburn, S.I. 2005. Development and evaluation of a PCR based assay for detection of the toxic dinoflagellate, *Gymnodinium catenatum* (Graham) in ballast water and environmental samples. *Biol. Invasions* 7(6):983-994.
- Patla, S.M. 2005. Monitoring results of northern goshawk nesting areas in the Greater Yellowstone Ecosystem: is decline in occupancy related to habitat change? *J. Raptor Res.* 39(3): 324-334.
- Pe'er, G., Saltz, D., and Frank, K. 2005. Virtual corridors for conservation management. *Conserv. Biol.* 19(6):1997-2003.
- Pearce, J.L., Venier, L.A., Eccles, G., Pedlar, J., and McKenney, D. 2005. Habitat islands, forest edge and spring-active invertebrate assemblages. *Biodivers. Conserv.* 14(12):2949-2969.
- Pérez, H.E. 2005. What students can do to improve graduate education in conservation biology. *Conserv. Biol.* 19(6):2033-2035.
- Perrin, M.R. 2005. A review of the taxonomic status and biology of the Cape parrot *Poicephalus robustus*, with reference to the brown-necked parrot *P. fuscicollis fuscicollis* and the grey-headed parrot *P.f. suahelicus*. *Ostrich* 76(3-4):195-205.
- Perry, L.G., Johnson, C., Alford, É.R., Vivanco, J.M., and Paschke, M.W. 2005. Screening of grassland plants for restoration after spotted knapweed invasion. *Restor. Ecol.* 13(4): 725-735.
- Price, S.J., Marks, D.R., Howe, R.W., Hanowski, J.M., and Niemi, G.J. 2005. The importance of spatial scale for conservation and assessment of anuran populations in coastal wetlands of the western Great Lakes, USA. *Landscape Ecol.* 20(4):441-454.
- Pullin, A.S., and Knight, T.M. 2005. Assessing conservation management's evidence base: a survey of management-plan compilers in the United Kingdom and Australia. *Conserv. Biol.* 19(6):1989-1996.
- Purdy, B.G., MacDonald, S.E., and Lieffers, V.J. 2005. Naturally saline boreal communities as models for reclamation of saline oil sand tailings. *Restor. Ecol.* 13(4):667-677.
- Pyšek, P., and Hulme, P.E. 2005. Spatio-temporal dynamics of plant invasions: linking pattern to process. *Ecoscience* 12(3): 302-315.
- Rappole, J.H., Renner, S.C., Shwe, N.M., and Sweet, P.R. 2005. A new species of scimitar-babbler (Timaliidae: Jabouilleia) from the sub-Himalayan region of Myanmar. *Auk* 122(4): 1064-1069.
- Rayfield, B., Anand, M., and Laurence, S. 2005. Assessing simple versus complex restoration strategies for industrially disturbed forests. *Restor. Ecol.* 13(4):639-650.
- Regan, T.J., Burgman, M.A., McCarthy, M.A., Master, L.L., Keith, D.A., Mace, G.M., and Andelman, S.J. 2005. The consistency of extinction risk classification protocols. *Conserv. Biol.* 19(6):1969-1977.

- Reid, N.B., and Naeth, M.A. 2005. Establishment of a vegetation cover on tundra kimberlite mine tailings: 1. A greenhouse study. *Restor. Ecol.* 13(4):594-601.
- Reid, N.B., and Naeth, M.A. 2005. Establishment of a vegetation cover on tundra kimberlite mine tailings: 2. A field study. *Restor. Ecol.* 13(4):602-608.
- Richardson, D.M., Rouget, M., Ralston, S.J., Cowling, R.M., Van Rensburg, B.J., and Thuiller, W. 2005. Species richness of alien plants in South Africa: environmental correlates and the relationship with indigenous plant species richness. *Ecoscience* 12(3):391-402.
- Riley, S.P.D., Busteed, G.T., Kats, L.B., Vandergon, T.L., Lee, L.F.S., Dagit, R.G., Kerby, J.L., Fisher, R.N., and Sauvajot, R.M. 2005. Effects of urbanization on the distribution and abundance of amphibians and invasive species in southern California streams. *Conserv. Biol.* 19(6):1894-1907.
- Ruesink, J.L. 2005. Global analysis of factors affecting the outcome of freshwater fish introductions. *Conserv. Biol.* 19(6): 1883-1893.
- Ruggiero, A., Solimini, A.G., and Carchini, G. 2005. The alternative stable state concept and the management of Apennine mountain ponds. *Aquat. Conserv.* 15(6):625-634.
- Saarinen, K., and Jantunen, J. 2005. Grassland butterfly fauna under traditional animal husbandry: contrasts in diversity in mown meadows and grazed pastures. *Biodivers. Conserv.* 14(13):3201-3213.
- Schmidt, A.L., and Scheibling, R.E. 2005. Population dynamics of an invasive green alga, *Codium fragile* subsp. *tomentosoides*, in tidepools on a rocky shore in Nova Scotia, Canada. *Ecoscience* 12(3):403-411.
- Schmidt, B.R. 2005. Monitoring the distribution of pond-breeding amphibians when species are detected imperfectly. *Aquat. Conserv.* 15(6):681-692.
- Schulte, L.A., Pidgeon, A.M., and Mladenoff, D.J. 2005. One hundred fifty years of change in forest bird breeding habitat: estimates of species distributions. *Conserv. Biol.* 19(6):1944-1956.
- Schumacher, B.D., and Parrish, J.D. 2005. Spatial relationships between an introduced snapper and native goatfishes on Hawaiian reefs. *Biol. Invasions* 7(6):925-933.
- Segarra-Moragues, J.G., Iriondo, J.M., and Catalán, P. 2005. Genetic fingerprinting of germplasm accessions as an aid for species conservation: a case study with *Borderea chouardii* (Dioscoreaceae), one of the most critically endangered Iberian plants. *Ann. Botany* 96(7):1283-1292.
- Sekercioglu, C.H., and Riley, A. 2005. A brief survey of the birds in Kumbira Forest, Gabela, Angola. *Ostrich* 76(3-4): 111-117.
- Simmons, M.T. 2005. Bullying the bullies: the selective control of an exotic, invasive annual (*Rapistrum rugosum*) by oversowing with a competitive native species (*Gaillardia pulchella*). *Restor. Ecol.* 13(4):609-615.
- Simmons, R.E. 2005. Declining coastal avifauna at a diamond-mining site in Namibia: comparisons and causes. *Ostrich* 76(3-4):97-103.
- Sleeman, J.C., Boggs, G.S., Radford, B.C., and Kendrick, G.A. 2005. Using agent-based models to aid reef restoration: enhancing coral cover and topographic complexity through the spatial arrangement of coral transplants. *Restor. Ecol.* 13(4): 685-694.
- Song, Z.P., Li, B., Chen, J.K., and Lu, B.R. 2005. Genetic diversity and conservation of common wild rice (*Oryza rufipogon*) in China. *Plant Species Biol.* 20(2):83-92.
- Staples, D.F., Taper, M.L., and Shepard, B.B. 2005. Risk-based viable population monitoring. *Conserv. Biol.* 19(6):1908-1916.
- Steinitz, O., Heller, J., Tsoar, A., Rotem, D., and Kadmon, R. 2005. Predicting regional patterns of similarity in species composition for conservation planning. *Conserv. Biol.* 19(6): 1978-1988.
- Stewart, B.S., and Wilson, S.G. 2005. Threatened fishes of the world: *Rhincodon typus* (Smith 1828) (Rhincodontidae). *Environ. Biol. Fish.* 74(2):184-185.
- Strasberg, D., Rouget, M., Richardson, D.M., Baret, S., Dupont, J., and Cowling, R.M. 2005. An assessment of habitat diversity and transformation on La Réunion Island (Mascarene Islands, Indian Ocean) as a basis for identifying broad-scale conservation priorities. *Biodivers. Conserv.* 14(12):3015-3032.
- Stuart, S.N., Archibald, G.W., Berry, R.J., Emmerich, S.D., Evans, D.M., Flenley, J.R., Gaston, K.J., Given, D.R., Gosler, A.G., Harris, P., Houghton, J., Lindquist, E.D., Mahan, D.C., Morecroft, M.D., Moyer, D.C., Murdiyars, D., Musiti, B.W.W., Nicolson, C., Oteng-Yeboah, A., Plumptre, A.J., Prance, G., Ramachandra, V., Sale, J.B., Sheldon, J.K., Simiyu, S., Underhill, L.G., Vickery, J., and Whitten, T. 2005. Conservation theology for conservation biologists - a reply to David Orr. *Conserv. Biol.* 19(6):1689-1692.
- Svancara, L.K., Brannon, R., Scott, J.M., Groves, C.R., Noss, R.F., and Pressey, R.L. 2005. Policy-driven versus evidence-based conservation: a review of political targets and biological needs. *BioScience* 55(11):989-995.
- Svensson, M., Johansson, P., and Thor, G. 2005. Lichens of wooden barns and *Pinus sylvestris* snags in Dalarna, Sweden. *Ann. Bot. Fenn.* 42(5):351-363.
- Tabacchi, E., and Planty-Tabacchi, A.M. 2005. Exotic and native plant community distributions within complex riparian landscapes: a positive correlation. *Ecoscience* 12(3):412-423.
- Takagawa, S., Nishihiro, J., and Washitani, I. 2005. Safe sites for establishment of *Nymphoides peltata* seedlings for recovering the population from the soil seed bank. *Ecol. Res.* 20(6):661-667.
- Tognelli, M.F., Silva-García, C., Labra, F.A., and Marquet, P.A. 2005. Priority areas for the conservation of coastal marine vertebrates in Chile. *Biol. Conserv.* 126(3):420-428.
- Torchin, M.E., Byers, J.E., and Huspeni, T.C. 2005. Differential parasitism of native and introduced snails: replacement of a parasite fauna. *Biol. Invasions* 7(6):885-894.
- Valdez-Moreno, M.E., Pool-Canul, J., and Contreras-Balderas, S. 2005. A checklist of the freshwater ichthyofauna from El Petén and Alta Verapaz, Guatemala, with notes for its conservation and management. *Zootaxa* 1072:43-60.
- Van Dyke, F. 2005. Between Heaven and Earth - evangelical engagement in conservation. *Conserv. Biol.* 19(6):1693-1696.
- Vanden Broeck, A., Villar, M., Van Bockstaele, E., and Van Slyc-



Smithsonian
National Museum of Natural History

Department of Botany
PO Box 37012
NMNH, MRC-166
Washington DC 20013-7012

Official Business
Penalty for Private Use \$300

- ken, J. 2005. Natural hybridization between cultivated poplars and their wild relatives: evidence and consequences for native poplar populations. *Ann. Forest Sci.* 62(7):601-613.
- Vellak, K., and Ingerpuu, N. 2005. Management effects on bryophytes in Estonian forests. *Biodivers. Conserv.* 14(13):3255-3263.
- Waltert, M., Mardiastuti, A., and Muhlenberg, M. 2005. Effects of deforestation and forest modification on understorey birds in Central Sulawesi, Indonesia. *Bird Conserv. Int.* 15(3):257-273.
- Wang, G.H. 2005. The western Ordos plateau as a biodiversity center of relic shrubs in arid areas of China. *Biodivers. Conserv.* 14(13):3187-3200.
- Washitani, I., Ishihama, F., Matsumura, C., Nagai, M., Nishihiro, J., and Nishihiro, M.A. 2005. Conservation ecology of *Primula sieboldii*: synthesis of information toward the prediction of the genetic/demographic fate of a population. *Plant Species Biol.* 20(1):3-15.
- Wasson, K., Fenn, K., and Pearse, J.S. 2005. Habitat differences in marine invasions of central California. *Biol. Invasions* 7(6):935-948.
- Wei, X., Wei, J.Q., Cao, H.L., Li, F., and Ye, W.H. 2005. Genetic diversity and differentiation of *Camellia euphlebia* (Theaceae) in Guangxi, China. *Ann. Bot. Fenn.* 42(5):365-370.
- Willi, J.C., Mountford, J.O., and Sparks, T.H. 2005. The modification of ancient woodland ground flora at arable edges. *Biodivers. Conserv.* 14(13):3215-3233.
- Williams, V.L., Witkowski, E.T.F., and Balkwill, K. 2005. Application of diversity indices to appraise plant availability in the traditional medicinal markets of Johannesburg, South Africa. *Biodivers. Conserv.* 14(12):2971-3001.
- Williamson, M., Pyšek, P., Jarošík, V., and Prach, K. 2005. On the rates and patterns of spread of alien plants in the Czech Republic, Britain, and Ireland. *Ecoscience* 12(3):424-433.
- Wilsey, B.J., Martin, L.M., and Polley, H.W. 2005. Predicting plant extinction based on species-area curves in prairie frag-

The Biological Conservation Newsletter is a monthly publication provided free of charge. If you would like to be added to the mailing list, contact Dr. Gary Krupnick, Department of Botany, Smithsonian Institution, PO Box 37012, NMNH MRC-166, Washington DC 20013-7012, or send e-mail to krupnickg@si.edu. You may also subscribe to receive e-mail notification when new issues are posted to the web. Send an e-mail message to listserv@si-listserv.si.edu containing only the following text: "SUBSCRIBE BCN FIRSTNAME LASTNAME". For more information, go to the web page <http://ravenel.si.edu/bcn>.

- ments with high beta richness. *Conserv. Biol.* 19(6):1835-1841.
- Wilson, C., and Tisdell, C. 2005. Knowledge of birds and willingness to support their conservation: an Australian case study. *Bird Conserv. Int.* 15(3):225-235.
- Winter, S.J., Esler, K.J., and Kidd, M. 2005. An index to measure the conservation attitudes of landowners towards Overberg Coastal Renosterveld, a critically endangered vegetation type in the Cape Floral Kingdom, South Africa. *Biol. Conserv.* 126(3):383-394.
- Wintle, B.A., Bekessy, S.A., Venier, L.A., Pearce, J.L., and Chisholm, R.A. 2005. Utility of dynamic-landscape metapopulation models for sustainable forest management. *Conserv. Biol.* 19(6):1930-1943.
- Wootton, L.S., Halsey, S.D., Bevaart, K., McGough, A., Ondreicka, J., and Patel, P. 2005. When invasive species have benefits as well as costs: managing *Carex kobomugi* (Asiatic sand sedge) in New Jersey's coastal dunes. *Biol. Invasions* 7(6):1017-1027.
- Zhu, H., Shi, J.P., and Zhao, C.J. 2005. Species composition, physiognomy and plant diversity of the tropical montane evergreen broad-leaved forest in southern Yunnan. *Biodivers. Conserv.* 14(12):2855-2870.