

BARCODING INDO-MALAYAN BIRDS

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The All Birds Barcoding Initiative (ABBI) was announced on 9 February 2005 at the First International Barcode Conference held at the Natural History Museum (London). It is the goal of ABBI to establish an archive of DNA barcodes (cytochrome oxidase 1 [COI] sequence from mtDNA) that are linked to museum specimens for all (~10,000) bird species (<http://www.barcodingbirds.org>). The DNA archive will include partial gene sequences from the mitochondrial COI gene, supplemented perhaps with sequences from other loci when needed (http://barcoding.si.edu/PDF/ABBI_Workshop_Report_14dec2005.pdf). The inaugural workshop of ABBI was held at the Museum of Comparative Zoology, Harvard University, from 7 to 9 September 2005. Forty-eight participants from 23 countries attended this workshop, and it was decided that barcoding approximately 2,500 bird species from the Indo-Malayan region should be a top priority. The reasons for this priority are this region's high species endemism and endangerment and relatively poor past and current ornithological research efforts (Sodhi et al. 2006). New bird species are still being discovered from the Indo-Malayan region (e.g. Rappole et al. 2005), and a great deal of unrecognized genetic diversity is likely to exist in birds in the region (e.g. Moyle et al., 2005; Zou et al., 2007). Therefore, a regional ornithological initiative such as the ABBI is likely to yield substantial insights into bird diversity in the region.

Twenty-six participants from nine countries convened in Singapore from 8 to 9 March 2007 to discuss how best to proceed with the barcoding of Indo-Malayan birds. Although concerns were voiced about the overall scientific value of a project based primarily on a single genetic locus, participants generally felt that a barcoding project in the Indo-Malaya would strengthen the network of ornithologists and promote research on birds. There was a strong commitment to basing the project on vouchered specimens deposited in museum collections. There was also clear recognition that, of all the world's regions, the Indo-Malayan has the lowest proportion of its birds represented in existing vouchered tissue collections. Presently inadequate specimen holdings, protracted permit processes, local bureaucratic complexities, paucity of funding, as well as the lack of facilities and infrastructure were identified as the main stumbling blocks to progress. However, many countries reported on a variety of successful advances in specimen collection and sequencing progress. Luan Keng Wang from Singapore, for example, reported on a successful programme in which accidentally killed birds from a variety of sources and localities are "salvaged" and made into museum specimens with tissue samples for DNA sequencing. Perhaps most inspiring was the presentation by Sri Lankan representatives Sarath Kotagama, Neil Fernandopulle and Rohan Pethiyagoda (RP in absentia). They have persuaded local officials to allow

collection of tissues for DNA barcoding and other molecular work. While exporting biological samples from Sri Lanka remains problematic, this difficulty can be avoided by taking advantage of the considerable laboratory resources within the country. Genetech in Colombo will be responsible for laboratory aspects of bird barcoding in Sri Lanka. By keeping the various steps of the barcoding process within the country, Sri Lanka provides a model as to how efforts by local scientists can surmount many of the hurdles to barcoding progress discussed at the meeting's outset. The Sri Lankan Bird Barcoding project, if successful, could provide a model for similar endeavours in other Indo-Malayan countries.

With this document, we welcome ornithologists working in the Indo-Malayan region to offer their feedback on and hopefully to participate in this initiative. Ornithologists working in Bangladesh, Brunei Darussalam, Cambodia, Laos, Myanmar and Timor-Leste are particularly encouraged to contact us. Efforts are now underway to identify potential funding sources for the Indo-Malayan ABBI Initiative and, in particular, the Sri Lankan component that is poised to proceed.

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