

DNA barcoding a useful tool for taxonomists

Sir— The Consortium for the Barcode of Life (CBOL; see www.barcoding.si.edu) is an international initiative of natural history museums, herbaria, other biodiversity research organizations, governmental organizations and private companies which wish to promote the development and use of DNA barcoding.

CBOL is in complete agreement with the major point raised by M. C. Ebach and C. Holdrege in Correspondence, that “DNA barcoding is no substitute for taxonomy” (*Nature* 434, 697; 2005).

CBOL views barcoding as a useful tool for taxonomists and a cost-effective system with which non-specialists, such as border inspectors, can assign unidentified specimens to known species. In both cases, CBOL views barcoding as part of taxonomy and rejects the idea that DNA taxonomy will replace the practice of taxonomy based on diverse character sets.

Taxonomists have begun using DNA barcodes in three ways. First, barcoding can be used as a ‘triage’ tool for sorting new collections into units based on barcode sequences, of which some will belong to known species and others will be new to science. In CBOL’s view, only expert taxonomists can resolve the relationship

between new barcode-based clusters and species.

Second, DNA barcodes can also help assign specimens to known species in those cases where morphologic features are missing (in the case of immature, partial or damaged specimens) or misleading (as in sexually dimorphic species). Third, barcodes can also be used as a supplement to other taxonomic datasets in the process of delimiting species boundaries.

Ebach and Holdrege are correct in stating “DNA barcoding generates information, not knowledge”. CBOL believes that this information can make systematists and the consumers of taxonomic information more knowledgeable. Therein lies its potential value.

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