

Consortium for the Barcode of Life

Terms of Reference

PREAMBLE

“DNA barcoding” was proposed by Dr. Paul Hebert in 2002 as a standardized technique for assigning biological specimens to their correct species using a short gene sequence. The number of interested researchers and potential users grew quickly, and the Alfred P. Sloan Foundation recognized the importance of DNA barcoding to science and society. The concept of an international Barcode of Life Initiative (BoLI) and an international Consortium for the Barcode of Life (CBOL) emerged during two planning workshops held in 2003 with support from the Sloan Foundation.

Recognizing that

- DNA barcode data are proving highly effective in assigning specimens to known species;
- DNA barcode data, used in conjunction with traditional taxonomic characters such as morphology, behavior, and ecological habits, will allow taxonomists to make species delimitations more precise;
- Barcode data complement traditional data by integrating pre-adult stages and highly dimorphic sexes into more comprehensive species definitions;
- Barcode data can be extremely useful to fields of science beyond taxonomy such as applied biology and ecosystem science that rely on accurate and reliable species identifications;
- DNA barcoding can create a global library of reference records that can be used by non-taxonomists to identify specimens, thereby freeing taxonomists from routine identification services and reducing the “Taxonomic Impediment”; and

Aware that

- Taxonomy is a scientific discipline with a long and rich history and well-established norms and standards;
- Many global initiatives are underway to reduce the Taxonomic Impediment, thereby increasing access to taxonomic information;
- The use of molecular data in taxonomy is widespread and increasing; and

Desiring to

- Explore the potential of DNA barcoding as a research tool and as a practical system for assigning biological specimens to their correct species;
- Make taxonomic data more accessible and valuable to society at large;
- Promote DNA barcoding as a global standard for specimen identification;
- Promote global participation in BoLI; and
- Create mutually beneficial partnerships with ongoing initiatives, thereby avoiding unnecessary duplication of effort,

The Member Organizations of the Consortium of the Barcode of Life affirm the importance and potential value of BoLI and agree to participate in the activities described in these Terms of Reference.

MISSION AND OBJECTIVES

CBOL's mission is to explore and develop the potential of DNA barcoding as a practical tool for species identification in taxonomic research, biodiversity studies and conservation, and for diverse applications that use taxonomic information in service to science and society.

In pursuing its mission, CBOL has the following objectives:

- Creating a public database of reference barcode data that are linked to voucher specimens, valid species names and associated information;
- Populating the barcode database with records from all taxonomic groups and geographic regions, starting with the groups and regions for which a species identification system is most needed;
- Expanding the community of researchers involved in BoLI;
- Increasing the community of users who are applying barcode data to scientific and practical problems; and
- Promoting the development of protocols, instruments, techniques and other tools needed by researchers who want to produce barcode data and the diverse stakeholders who want to use them.

ORGANIZATION AND PROCEDURES

CBOL will operate as a catalyst for distributed activities that are planned and conducted by its members, usually in partnership with other initiatives in biodiversity, taxonomy and systematic research. Very few CBOL activities will be overseen entirely and only by CBOL. Accordingly, CBOL will operate with the smallest possible bureaucracy and will conduct its projects as distributed, collaborative activities. CBOL will conduct most of its administrative business through electronic mail and telephone conference calls.

PARTICIPANTS

CBOL will consist of Member Organizations, an Executive Committee, a Scientific Advisory Board, and a Secretariat Office.

Member Organizations. CBOL encourages diverse organizations from around the world to become CBOL Member Organizations, and to become active participants in BoLI through CBOL's activities. Membership in CBOL is open to natural history museums, zoos, herbaria, botanical gardens, universities and their constituent departments and institutes, other research bodies, conservation organizations, government agencies, NGOs, private companies, and other organizations with an interest in biodiversity and species identification. Organizations join CBOL when a senior official of that organization signs a Memorandum of Cooperation, a legally non-binding statement that expresses the organization's interest in BoLI and CBOL's activities, and its willingness to submit its barcode data to a public repository. The Memorandum of Cooperation that is currently in place expires on 31 August 2009.

Membership in CBOL involves no financial contribution to CBOL or other commitment of resources. Member Organizations nominate potential members of CBOL's Executive Committee and Scientific Advisory Board. CBOL will hold meetings of the representatives of Member Organizations in conjunction with International Barcode Conferences, which are held

approximately every two years. CBOL will provide Member Organizations with periodic updates via email between these biennial meetings.

Executive Committee. CBOL will be directed by an Executive Committee which will meet twice yearly and will be responsible for:

- Setting the strategic direction, policies, and priorities of CBOL, developed with input from Member Organizations and the Scientific Advisory Board;
- Representing the interests of CBOL's Member Organizations while pursuing CBOL's mission;
- Overseeing the preparation and submission of grant proposals (including the CBOL grant to the Sloan Foundation), and meeting all the terms and conditions of grants received by CBOL;
- Creating and overseeing CBOL's major activities, described below;
- Approving all major expenditures of grant funds;
- Appointing members to the Scientific Advisory Board from among nominees from the Member Organizations; and
- Overseeing the work of the CBOL Secretariat Office, including the selection of the CBOL Executive Secretary.

CBOL's Executive Committee will consist of:

- A Chair, who will be the Principal Investigator of the primary grant supporting CBOL. For 2004-2008, this is the grant from the Alfred P. Sloan Foundation;
- CBOL's Executive Secretary; and
- Five individuals nominated by the Member Organizations.

The Chair's term of appointment coincides with the duration of funding for CBOL from the Sloan Foundation. The Executive Secretary will be a full-time employee of CBOL, supported by the Sloan Foundation grant, selected by the Executive Committee, and hired on fixed-term contracts. Initially, the other five members of the Executive Committee were approved as a slate of candidates selected by the Chair and Executive Secretary from among nominees from Member Organizations. These individuals and their initial terms of appointment are:

- Dr. José Alves-Gomes, Instituto Nacional de Pesquisas da Amazônia, Manaus (initial term 20 June 2005 to 19 June 2007)
- Dr. James Edwards, Global Biodiversity Information Facility, Copenhagen (initial term 20 June 2005 to 19 June 2006)
- Richard Lane, The Natural History Museum, London (initial term 20 June 2005 to 19 June 2006)
- Dr. Helida Oyieke, National Museums of Kenya, Nairobi (initial term 20 June 2005 to 19 June 2007)
- Simon Tillier, Museum national d'Histoire naturelle, Paris (initial term 20 June 2005 to 19 June 2007)

These initial terms of appointment may be renewed once for two years. All future appointees to the Executive Committee will be selected by all members of the Executive Committee, including those members whose terms are coming to an end, from among nominees by the Member Organization. Subsequent to the initial appointees, members of the Executive Committee will be appointed for a term of two years, renewable once for a second two-year term.

Scientific Advisory Board. CBOL's Executive Committee will appoint a Scientific Advisory Board that will meet annually and will:

- Provide the Executive Committee with advice on scientific and technical matters, including suggestions for new CBOL activities and priorities;
- Respond to requests from the Executive Committee for information and reviews of proposals for new CBOL activities; and
- Provide a venue for the exchange of information and coordination among different CBOL activities.

The Scientific Advisory Board will consist of:

- The Chair of, or other designated representative from, each Working Group; and
- Approximately 11 other individuals, selected by the Executive Committee from among nominees from the Member Organization. In selecting these individuals, the Executive Committee will seek experienced researchers who collectively constitute a balanced representation of Member Organizations with respect to gender, geographic region, and scientific and technical discipline.

One member of the Scientific Advisory Board will act as the designated liaison for each of CBOL's major activities.

Secretariat Office. CBOL's Executive Committee will oversee a Secretariat Office that will:

- Implement the strategies and priorities established by the Executive Committee;
- Prepare proposals to the Executive Committee for new activities, and for CBOL's overall Program of Work;
- Provide the Member Organizations, Executive Committee and Scientific Advisory Board with regular reports of activities and progress;
- Perform outreach that will expand participation in CBOL and the Barcode Initiative in both developed and developing countries;
- Provide administrative support to CBOL's major activities;
- Carry out the administrative functions of CBOL, including financial and programmatic management of grants to CBOL; and
- Assist the participants in major CBOL activities in their efforts to obtain funding for their activities.

The Secretariat Office will consist of an Executive Secretary and an Administrator, and any additional staff members whose positions will be approved by the Executive Committee. Members of the Secretariat Office staff will be employed on term appointments subject to the availability of funding and will report to the Chair of the Executive Committee.

CBOL ACTIVITIES

CBOL's Major Activities will include:

- Working Groups that address large-scale problems that many, if not all, barcoding projects will encounter. Working Groups will be open and inclusive, and will focus on technical issues. CBOL has commissioned the following Working Groups:
 - Database Working Group, created in Washington, DC in May 2004;
 - DNA Working Group, created in Washington, DC in May 2004;
 - Plant Working Group, created in Washington, DC in May 2004; and
 - Data Analysis Working Group, created in London in February 2005;
- Barcoding "campaigns" that obtain representative barcodes for large numbers of species in particular taxonomic groups;
- Networks that promote communication and cooperative barcoding projects among groups of individuals and organizations that share an interest that can be served by barcoding; and
- *Ad hoc* committees formed to address a specific issue related to DNA barcoding.

Each CBOL activity will provide the Executive Committee, through the Secretariat Office, with:

- An initial statement of goals and mission;
- A nominated leader and list of 5-10 core members;
- A brief description of its program of work; and
- Periodic reports of progress towards its goals.

The Executive Committee will be responsible for assessing the effectiveness of all activities and may decide to reconstitute or discontinue an activity.

CBOL's major activities may request financial and administrative support from the Secretariat Office. Support from the Sloan Foundation grant may be used for catalytic activities such as planning meetings and for partial support of workshops and conferences. Sloan Foundation funds cannot be used for research, research infrastructure, training courses, or capacity building. In most cases, leaders of CBOL activities will need to seek support of their activities from funding sources other than CBOL and the Sloan Foundation.

CBOL will also encourage the initiation of smaller barcoding projects, but CBOL will not be involved in the administrative or financial support of these smaller projects.

CHANGE OF STATUS

The current version of the Memorandum of Cooperation signed by each CBOL Member Organization expires on 31 August 2009. Prior to that date, CBOL's Executive Committee will review CBOL's progress towards its goals. Based on the results of that evaluation, the Executive Committee may propose an extension of the Memorandum of Cooperation to the Member Organizations which would extend CBOL's operation beyond that date.

It is the responsibility of each Member Organization to inform the CBOL Secretariat of a change in its membership status as outlined in these Terms of Reference. It is the responsibility of each member of the CBOL Executive Committee and Scientific Advisory Board to inform the CBOL Secretariat of changes in his or her participation as outlined in these Terms of Reference.

ADOPTION AND AMENDMENT

Terms of Reference, Consortium for the Barcode of Life

These Terms of Reference were adopted by CBOL's Executive Committee at its meeting in Cape Town, South Africa, on Sunday, 9 April 2006.