DNA Barcoding in Europe – Report from the EDIT conference in Leiden, 3-5 Oct. 2007

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Almost 2.2 billions of US dollars have been projected for space telescopes – if there is so much money available for studying space, which is not going to change perceivably in our lifetime, why should there not be a fraction of those funds available for investigating the biodiversity on our own planet, which is vanishing at an alarming speed? This was a polemic but nevertheless legitimate question posed by Paul Hebert, the father of DNA barcoding, to the predominantly European audience of the meeting. More than 140 participants from 20 European countries and a few representatives from Canada and the US gathered in Leiden in the beginning of October to present their work and discuss how to promote DNA barcoding research in Europe. The scope of the meeting also included other molecular methods for species identification. Thus, the scientific program, consisting of 72 oral and poster presentations, covered a broad range of methods, applications and organism groups, demonstrating the aptness and the involvement of European researchers in the field of molecular identification. However, rather than providing insular solutions for specific groups of organisms or narrow applications, the central idea of DNA barcoding is to agree on suitable and simple DNA sequence markers for broad groups of organisms and thereby create a unified and easy-to-implement identification system that will both democratize and advance taxonomy. This concept and some nuts and bolts from the praxis of DNA barcoding were presented by representatives of CBoL, the Consortium for the Barcoding of Life, which sees its function in helping the research community to reach the necessary consensus for achieving these goals. Though many individual researchers from Europe are part of international DNA barcoding campaigns and selected European countries have financed their own national DNA barcoding schemes, there is at present no European DNA barcoding program. Many of the participants of the meeting declared their willingness to actively advance DNA barcoding research in Europe. A number of strategies were discussed of how to put Europe on the international DNA barcoding map:

- EDIT WP 3.4 will act as a coordination and information hub for European DNA barcoding initiatives for EDIT and non-EDIT institutions.

The website http://www.ecbol.org will be instrumental in this. Apart from listing institutions where DNA barcoding research is carried out, the website now also lists groups of researchers

who are interested in initiating and proposing collaborative DNA barcoding projects ("funding groups").

- Europe should assume an international role and become a central node for DNA barcoding as suggested in the Canadian IBOL (international barcode of life) initiative, see http://www.ibol.org). The prerequisite for this is to document a minimum of 18 M€ European (including national European) funding for DNA barcoding applied for and granted after September 2006. Contact point for having a project registered towards iBOL is EDIT WP 3.4 (http://ecbol.org; *barcode@cbs.knaw.nl*).
- Several EU Framework 7 programs and calls allow for the application for DNA barcoding funds, i.e. the LIFE+ program, protection from invasive organisms, and, in combination with other technologies, funds for design studies.
- With a view to achieving a leading role in DNA barcoding, and with view to the abundance of taxonomic expertise and the taxonomic value of European collections, there was a general consensus that Europe would profit greatly from a European central DNA barcoding facility. If established in a less favoured region of Eastern Europe, such a facility could serve to advance European integration and relevant infrastructure development funds could be applied for.
- DNA barcoding meets the goals of European funding as a technology that could be used for the benefit of the European people and their wellbeing. Therefore, scientists are urged to make their national EU representatives aware of the potential and possibilities of DNA barcoding so as to create a European funding landscape that will allow for the submission of DNA barcoding projects. With view to societal needs, a problem-oriented approaches (i.e. health, agriculture, border control, biological invasions, biodiversity assessment etc.) was considered more promising than essentially taxonomic projects. However, making use of available resources such as collections is a European research funding priority and should also be considered.
- Owing to the simplicity of the principle, the idea of DNA barcoding is easy to convey to non-experts. This and its possible applications make DNA barcoding an ideal subject for private science funding. Respective avenues should be investigated.

In summary, the meeting met its goal of providing a platform for scientific exchange for European scientists from different disciplines. As one of the organizers of the meeting I hope that the very positive atmosphere created by the participants during the meeting will be transformed in a multitude of initiatives. EDIT WP 3.4 is ready to assume its assigned role as information and coordination hub, providing a front end for European DNA barcoding projects. The exchange with international scientists from CBoL and the Canadian Barcoding network reinforced the notion that such a front end is needed for European research to overcome the fragmentation of European taxonomic research, not only for our own benefit, but also to be in a position to assume a leading role in international scientific campaigns.

Relevant internet pages and contacts:

http://www.ecbol.org: webpage of EDIT WP3.4, corresponding contact *barcode@cbs.knaw.nl* or *r.linden@cbs.knaw.nl* (Mr Rien van der Linden)

http://ibol.org

http://barcoding.si.edu/

http://cordis.europa.eu/fp7,
http://ec.europa.eu/environment/life/funding/lifeplus.htm