

IUCN SSC Conservation Genetics Specialist Group



2018 Report



Mike Bruford



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Co-Chairs

Mike Bruford (1)
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Location/Affiliation

(1) School of Biosciences, Cardiff University, Wales
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Number of members

108

Social networks

Twitter: @congenetics
Website: www.cgsg.uni-freiburg.de



CONSERVATION GENETICS
SPECIALIST GROUP

Mission statement

The Conservation Genetics Specialist Group (CGSG) will establish guidance for pressing genetic policy and management issues. CGSG also provides genetic advice on policy and management within IUCN's Species Survival Commission (SSC) and expert knowledge and assistance to SSC Specialist Groups. CGSG will facilitate a fuller appreciation, evaluation and conservation of genetic diversity and resources at all levels, providing a forum for all stakeholders to value and conserve this crucial element of Planet Earth's life systems.

Projected impact for the 2017-2020 quadrennium

Genetic diversity is one of the three major components of biodiversity, but still overlooked in most plans for conserving biodiversity. We foresee that raising the awareness of genetic diversity as one of the key requisites for species to adapt and survive will directly benefit species action plans. In addition, the implementation of genetic criteria into the Red List assessment process will help us to define the conservation status more precisely.

Targets for the 2017-2020 quadrennium

Plan

Policy: (1) engage with the Convention on Biological Diversity (CBD) 2020 process; (2) propose an IUCN resolution on genetics in CBD targets; (3) develop IUCN guidance for monitoring changes in genetic diversity; (4) develop a guidance document on biobanks and planning for conservation of intra-specific genetic diversity.

Network

Capacity building: (1) develop Guidelines on Distinct Genetic Diversity during the development of *A Global Standard for the Identification of Key Biodiversity Areas*; (2) build regional capacity for conservation genetics advice with an aim of having self-supporting regional groups in five years; starting groups will contain domiciled individual and non-domicile advisors active in regional research and capacity building, under the understanding that non-domicile individuals will step back from group after five years.

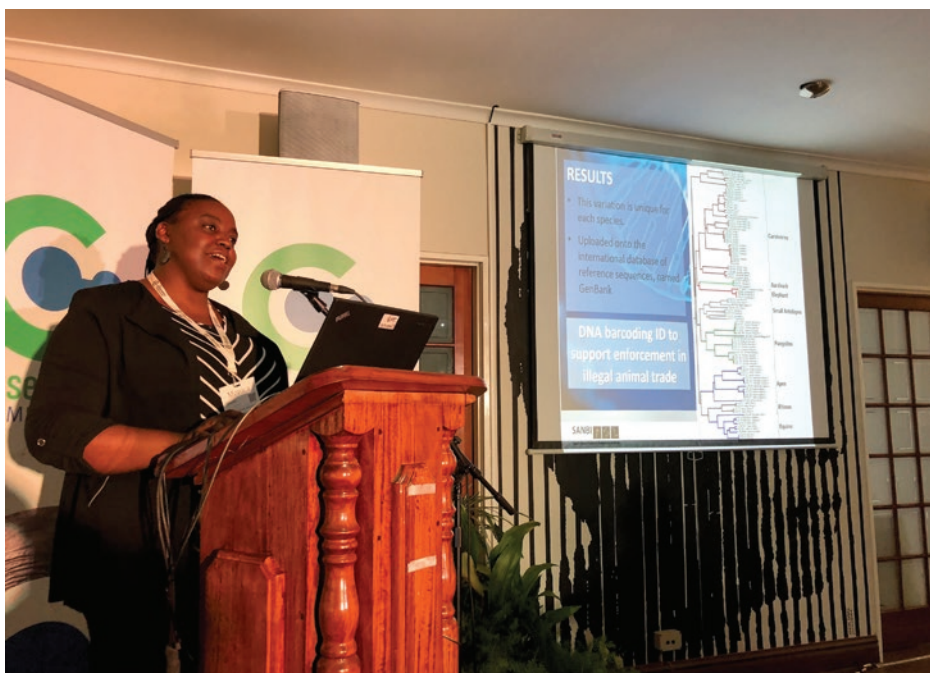
Synergy: every Specialist Group chair has a direct contact point(s) in CGSG, who is responsible for rapid response to genetic questions, advice, support and escalation of major issues to the wider IUCN CGSG.

Communicate

Communication: (1) publish position statement for the use of genetics in defining conservation units; (2) provide online resources for definitions of genetic terminology, guidelines on sampling and study design, and distinguish among technical approaches; (3) be pro-active in communicating the activities of the CGSG; (4) raise awareness of conservation genetics within the broader community.

Technical advice: produce a guidance document for the use of genetics in Red Listing.

Monica Mwale giving a talk on use of DNA barcoding ID to support enforcement in illegal animal trade
Photo: Michael Bruford



Activities and results 2018

Plan

Policy

i. In the context of the Convention on Biological Diversity (CBD) 2020 process, the CGSG contributed to the document: "Supporting achievement of Aichi Biodiversity Target 12 of the Strategic Plan for Biodiversity 2011-2020". (KSR #26)

ii. To contribute to IUCN guidance for monitoring changes in genetic diversity, the CGSG established a working group scoping the international literature and working on a scientific paper. (KSR #26)

iii. Guidance document on biobanks and planning for conservation of intra-specific genetic diversity is in development for 2020. (KSR #26)

Network

Capacity building

i. Mike Bruford contributed to the current set of Guidelines on Distinct Genetic Diversity during the development of *A Global Standard for the Identification of Key Biodiversity Areas* (he is a member of the KBA Standards Group), but more work needs to be done for the next version to adequately include genetic diversity. (KSR #18)

ii. An African subgroup has been established for conservation genetics advice in addition to the already-established groups in America, Europe, Oceania and Asia. The group was launched at the Conservation Symposium, KwaZulu Natal in November 2018. Mike Bruford attended and gave a keynote presentation to launch the group and a symposium was held where group members gave presentations. (KSR #18)

Synergy

i. With the availability of a specific person (Silvia Perez-Espona) as a part time secretary based at University Edinburgh, we have established a central focal person for contact. Contacts with CCSG have been established for establishing a connectivity plan for large carnivores in Europe. CGSG was present at the Conservation Planning Specialist Group annual meeting in Bangkok. Gernot Segelbacher is a member of the Technical Group of the Task Force on Synthetic Biology. (KSR #29)

Communicate

Communication

i. Recent publication by members on species delimitation using genomics (Stanton, D.W.G., et al. (2019). More grist for the mill? Species delimitation in the genomic era and its implications for conservation. *Conservation Genetics* 20:101–113. [DOI 10.1007/s10592-019-01149-5]; 3 CGSG members as co-authors) but position statement remains pending. (KSR #28)

ii. G-BiKE COST Action, involving CGSG members, was funded and kicked off in March 2019 (see point iv below), and is upgrading the existing ConGRESS website to include genomic indicators (www.congressgenetics.eu/Default.aspx) (KSR #28)

iii. A number of different sessions have been organised by members of the CGSG: (1) First Meeting of the African Chapter of CGSG; (2) European Congress of Conservation Biology (ECCB) in Jyväskylä, Finland; (3) GEOBON Meeting in Beijing, China; (4) Wildlife Society Conference in Cleveland, US; (5) Oceania Congress of Conservation Biology (SCBO) in Wellington, New Zealand; (6) Evolution Conference in Montpellier, France; (7) involvement in the FutureEarth BioGENESIS project; (8) providing bi-annual newsletter; and (9) running Twitter feed. (KSR #28)

iv. An EU Cost Action Programme (G-BIKE)

has been developed by several members to raise awareness of genetic tools in a conservation background. (KSR #28)

Technical advice

i. We have recently recruited Prof. Cock Van Oosterhuit to CGSG, who will lead the making of the guidance document for the use of genetics in Red Listing.

Acknowledgements

We thank the organisers of the First African CGSG Meeting, especially CGSG members Ian Rushworth, Isa-Rita Russo, Paulette Bloomer and Catherine Sole.

Summary of activities 2018

Species Conservation Cycle ratio: 3/5

Plan	3	
Network	3	
Communicate	5	

Main KSRs addressed: 18, 26, 28, 29

KSR: Key Species Result