

**Crocodile Specialist Group Steering Committee Meeting**  
**Universidad Nacional del Litoral, Santa Fe, Argentina**  
(6 May 2018)

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**Taxonomy**

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**Report on Activities**

1. At the request of the CSG Executive Committee, we established a Taxonomy and Identification Thematic Group, with Kent Vliet serving as Chair. The focus of the group will be to alert and advise the Executive Committee, the CSG at large, and requests from outside entities, on matters related to crocodylian taxonomy, identification, and phylogeny.
2. A group of crocodylian specialists were selected and invited to participate in the group. Members suggested additional names for inclusion. The membership includes Kent Vliet (Chair), Chris Brochu (Vice-chair) and the following members: George Amato, Matthew Shirley, Lou Densmore, Travis Glenn, Bob Godshalk, Evon Hekkala, David Ray, Perran Ross, David Rodriguez (USA), Armando Escobedo Galban (Mexico), Iri Gill (UK), Sally Isberg (Australia), Yoamel Milián-García (Cuba), Fabian Schmidt (Germany), Miryam Venegas-Anaya (Panama), Thomas Ziegler (Germany).
3. We have established a Google Groups listserv to facilitate communication within the group.
4. Once membership was determined, our next order of business was to prepare Terms of Reference for consideration by the Executive Committee. The accepted TOR are attached below. This includes a Mission Statement, Goals for the Group, and a list of initial action items.
5. There was considerable discussion on the name of the group, including Taxonomy and Identification; Taxonomy, Identification, and Phylogenomics. The CSG Chair suggested it was best to simplify the name and indicate the roles of identification and phylogeny in the stated goals of the TOR.
6. The next action item was to survey and summarize the individual group members on their positions on current crocodylian taxonomy and identify areas of disagreement or uncertainty. A SurveyMonkey survey was prepared and made available to the group. We had 12 completed surveys. The results were not surprising, but do identify those taxa in need of further consideration:
  - 6.1. Species for which there is total taxonomic support: *Alligator mississippiensis*, *Alligator sinensis*, *Crocodylus johnstoni*, *Crocodylus mindorensis*, *Crocodylus rhombifer*, *Gavialis gangeticus*, *Melanosuchus niger*, *Paleosuchus trigonatus*, *Tomistoma schlegelii*.
  - 6.2. Species for which there is almost essentially support: *Caiman latirostris*, *Paleosuchus palpebrosus*, *Crocodylus palustris*, *Crocodylus moreletii*, *Mecistops cataphractus*.
  - 6.3. Taxa for which there is minor disagreement/need for discussion/further research: *Caiman yacare*, *Crocodylus intermedius*, *Crocodylus niloticus*, *Crocodylus novaeguineae*, *Crocodylus porosus*, *Crocodylus siamensis*, *Crocodylus suchus*, *Mecistops sp. nov. cf. cataphractus*, *Osteolaemus osborni*, *Osteolaemus tetraspis*, *Osteolaemus sp. nov. cf. tetraspis*.
  - 6.4. Taxa for which there is considerable disagreement/need for discussion/further research: All subspecies of *Caiman crocodilus*, *Crocodylus acutus*, *Crocodylus sp. nov. cf. novaeguineae*, *Crocodylus raninus*.
7. Of the above, the taxa in parts 5.3 and 5.4 are those on which this group will concentrate its discussions and, in several cases, in which further research will be necessary. Work is in progress on several of these issues. We are waiting for publication of projects before accepting or endorsing changes in accepted taxonomy.
8. Dr. Peter Paul Van Dijk, the new Chair of the CITES Nomenclature Committee, apparently instigated the discussion with the CSG Chair that led to the formation of this group. In preparation of the upcoming Animals Committee meeting, Peter Paul prepared a draft list of modifications to crocodylian taxonomy post-King and Burke (1989), the current Nomenclatural Standard Reference (NSR) for the Crocodylia. This draft recognizes *Osteolaemus osborni*, *Crocodylus suchus* and the genus *Mecistops* for the slender-snouted crocodile *M. cataphractus*. His list also recognizes *Caiman yacare* as a species, rather than a subspecies of *C. crocodilus*. The CSG Taxonomy group has agreed with all of these modifications, and has notified Peter Paul of this.
9. We are in the process of compiling a summary table of the current consensus of the group of the taxonomy of living crocodylians. The Taxonomy Group will be meeting in Santa Fe and are planning a meeting in the United

States later in the year to get together and further flesh out these summaries. This table should serve for the time being as our position on crocodylian taxonomy. Ultimately, the group will prepare something more formal and extensive, perhaps similar to the King and Burke (1989) publication.

10. We have not yet begun to discuss in earnest our other stated mandate, that of developing identification tools for crocodylian taxa. Work is underway presently to help identify morphological characters to help discriminate between cryptic species identified initially by molecular means. More needs to be done in this regard before we can prepare materials to be used by CITES, customs inspectors, etc.

**Prepared by:** Kent Vliet, Vice Chair Taxonomy

**Date prepared:** 5 April 2018

**IUCN-SSC Crocodile Specialist Group  
Taxonomy and Identification Thematic Group**

**Terms of Reference  
(11 December 2017)**

**1. Background**

- 1.1. Dr. Peter Paul Van Dijk, the new Chair of the CITES Nomenclature Committee, raised with the CSG Chair whether the current CITES reference for crocodylian taxonomy (Wermuth and Mertens 1961) was still suitable.
- 1.2. The concern was that in addition to the morphological-based species identifications of the past, DNA-based taxonomy had now advanced greatly over the last 55 years, and increased synergism may be needed.
- 1.3. The CSG Executive Committee, after consulting various senior CSG members, agreed by consensus that the CSG now needed a Taxonomy Thematic Group, whose focus would extend to both identification and phylogeny.
- 1.4. Dr. Kent Vliet kindly agreed to chair this new group within the CSG.

**2. Organization**

Dr. Vliet identified a number of CSG members whom he felt could contribute to the group in the first instance, and they were invited to join. The group currently comprises:

Vice Chair: Kent Vliet (USA)

Deputy Vice Chair: Chris Brochu (USA)

Members: Matthew Shirley (USA), Lou Densmore (USA), Travis Glenn (USA), Perran Ross (USA), George Amato (USA), Sally Isberg (Australia), Iri Gill (UK), David Ray (USA), Bob Godshalk (USA), Fabian Schmidt (Germany), Thomas Ziegler (Germany), Miryam Venegas-Anaya (Panama), Evon Hekkala (USA), David Rodriguez (USA), Armando Escobedo Galban (Mexico), Yoamel Milián-García (Cuba).

**3. Mission**

The Taxonomy Thematic Group will provide the CSG Chair and membership with expert knowledge on crocodylian systematics.

**4. Goals and Terms of Reference**

The Taxonomy Thematic Group will aim to:

- 4.1. Clarify and stabilize crocodylian systematics and nomenclature;
- 4.2. Develop and maintain an updated standard reference source for taxonomy and phylogenetic relationships;
- 4.3. Provide practical identification tools that meet the specific needs of CITES, customs offices, and other authorities; and,
- 4.4. Encourage research aimed at resolving areas of taxonomic uncertainty.

**5. Action Items**

- 5.1. Finalize draft Terms of Reference for consideration by the CSG Chair;
- 5.2. Finalize name as the “Taxonomy Thematic Group” (CSG-TAX);
- 5.3. Finalize the composition of membership of CSG-TAX;
- 5.4. Begin review among the CSG-TAX membership of current taxonomy and identify areas of disagreement or uncertainty;
- 5.5. Begin to identify discreet projects suitable for external funding; and,
- 5.6. Examine the relative roles of core activities by the CSG-TAX versus projects implemented by CSG-TAX members and non-members.

**6. Budget**

- 6.1. Identify sources of potential funding for the activities of the CSG-TAX and projects undertaken by its members.