



DEPARTMENT of BIOLOGY

Emily Braker
University of Colorado Museum of Natural History
Henderson Building
15th and Broadway,
Boulder, CO 80309

Dear Ms. Braker,

I am a graduate student at Villanova University working with Dr. Aaron Bauer on my thesis concerning the osteological development of the geckos within *Aristelliger* and *Teratoscincus*. These genera possess unique supraorbital ossifications, called parafrontal bones, that have remained uninvestigated since their discovery 26 years ago. Recent molecular and morphological data have supported a close relationship between *Aristelliger* and *Teratoscincus* within the family Sphaerodactylidae. This family is known for its highly miniaturized taxa, with the exception of the large-bodied *Aristelliger* and *Teratoscincus*. I hypothesize that the parafrontal bones of these taxa are homologous and their absence in the miniaturized lineages is due to a threshold body size, below which parafrontals don't develop. By studying patterns of ossification throughout ontogenetic growth, we will be able to better understand osteological development in relation to large body size, thus elucidating evolutionary history of sphaerodactylid geckos. Because I require different life stages of both genera, I have arranged to collect *Aristelliger* from the field as well as obtain a small number of *Teratoscincus* commercially. I still, however, need hatchling/juvenile and adult *Aristelliger* species I cannot collect in the field season this summer. These specimens will be used for clearing and staining to verify presence of parafrontals, characterize their definitive structure, and create a series illustrating the postnatal ontogenetic development of these structures. Ideally, we would need five individuals, ranging from juvenile to adult, for clearing and staining for each species.

Based on my online searches, the University of Colorado Museum of Natural History has the greatest number of *A. georgeensis*. Because of this I am approaching the Museum first. I would like to formally request a loan of the following fluid-preserved specimens:

Catalogue Number	Genus	Species
UCM 16173	<i>Aristelliger</i>	<i>georgeensis</i>
UCM 16174	<i>Aristelliger</i>	<i>georgeensis</i>
UCM 16175	<i>Aristelliger</i>	<i>georgeensis</i>
UCM 16176	<i>Aristelliger</i>	<i>georgeensis</i>
UCM 16183	<i>Aristelliger</i>	<i>georgeensis</i>



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After analyses, cleared and stained specimens will be stored in glycerin with thymol crystals. I will acknowledge the University of Colorado in all publications that result from the loaned material. Within said publications, the specimens will be cited using the UCM acronym preceding the catalog number. Two copies of each publication resulting from use of loaned specimens will be sent to the University of Colorado following publication.

Please ship samples to:

Dr. Aaron Bauer
Department of Biology
Villanova University
800 Lancaster Ave
Villanova, PA 19085

With this letter Dr. Aaron Bauer formally requests a loan of this material on my behalf.

Sincerely,

Aaron H. Griffing
Graduate Student, Villanova University

06/09/2015
Date

Aaron M. Bauer
Graduate Advisor, Villanova University

06/09/2015
Date