

Tomographic data source for *chiroptera*

Morphosource / American Museum of Natural History, New York, USA, for the project Digitizing extant bat diversity, Shi et al. 2018 - PLOS ONE: <https://doi.org/10.1371/journal.pone.0203022> *Tadarida\_brasiliensis\_F\_9014\_90487*, *Myotis\_leibii\_F\_7228\_90146*, *Ametrida\_centurio\_F\_8914\_53108*, *Tadarida\_brasiliensis\_F\_9029\_90495*, *Saccolaimus\_saccolaimus\_saccolaimus\_9733\_AMNH\_101604\_cranium*, *Nyctimene\_certans\_10525\_AMNH\_279187*, *Tadarida\_brasiliensis\_F\_9016\_90494*, *Pteropus\_vampyrus\_F\_8019\_89753*, *Emballonura\_raffrayana\_raffrayana\_9781\_AMNH\_101939*, *Saccolaimus\_saccolaimus\_saccolaimus\_9736\_AMNH\_101605\_cranium*, *Sturnira\_lilium\_F\_8641\_125858*, *Aethalops\_alecto\_alecto\_10516\_AMNH\_247163*, *Pteropus\_rufus\_10864\_AMNH\_100492*, *Pteropus\_molossinus\_10865\_AMNH\_87168\_cranium*, *Acerodon\_jubatus\_F\_7847\_161197*, *Hipposideros\_cervinus\_cervinus\_10836\_AMNH\_102250*, *Nycteris\_javanica\_10191\_AMNH\_102372*, *Hipposideros\_larvatus\_neglectus\_10837\_AMNH\_103231*, *Nycteris\_javanica\_10212\_AMNH\_102378*, *Hipposideros\_diadema\_10818\_AMNH\_102302*, *Hipposideros\_pelingensis\_10838\_AMNH\_102291\_cranium*, *Nyctimene\_certans\_10525\_AMNH\_279187*, *Acerodon\_jubatus\_F\_7847\_161197*, *Pteropus\_neohibernicus\_10889\_AMNH\_105285*, *Hipposideros\_dyacorum\_10787\_AMNH\_106953*, *Pteropus\_neohibernicus\_10879\_AMNH\_105251*, *Dobsonia\_minor\_10491\_AMNH\_105177\_cranium*, *Nyctimene\_aello\_10485\_AMNH\_105102\_cranium*, *Megaderma\_lyra\_lyra\_9735\_AMNH\_208822\_cranium*, *Acerodon\_celebensis\_10564\_AMNH\_153137\_cranium*, *Desmodus\_rotundus\_F\_8640\_99345*, *Myotis\_californicus\_F\_7121\_98964*, *Pipistrellus\_subflavus\_F\_7079\_98947*, *Eptesicus\_fuscus\_F\_6950\_77842*, *Rhogeessa\_aeneus\_F\_8880\_79938*, *Chaerephon\_jobensis\_F\_8911\_81125*, *Rhogeessa\_parvula\_F\_6965\_83314*, *Myotis\_sodalis\_F\_7238\_83587*, *Lasiurus\_borealis\_F\_6951\_89680*, *Artibeus\_jamaicensis\_F\_9006\_93574*, *Choeroniscus\_godmani\_F\_8991\_83316*, *Macrotus\_waterhousii\_F\_8590\_95718*, *Erophylla\_sezekorni\_F\_8982\_97624*, *Sturnira\_ludovici\_F\_8625\_95704*, *Tadarida\_brasiliensis\_F\_6634\_98525*, *Pteropus\_giganteus\_F\_8020\_91079*, *Nyctinomops\_laticaudatus\_F\_6632\_91175*, *Artibeus\_jamaicensis\_F\_9018\_93300*, *Artibeus\_jamaicensis\_F\_9006\_93574*, *Micronycteris\_megalotis\_F\_8977\_95660*, *Hipposideros\_diadema\_10818\_AMNH\_102302*, *Carollia\_brevicauda\_F\_8527\_126789*, *Sturnira\_oporaphilum\_F\_8621\_126751*, *Artibeus\_glaucus\_F\_8549\_126742*, *Artibeus\_planirostris\_F\_8528\_126736*, *Micronycteris\_minuta\_F\_8973\_126729*, *Nyctimene\_cephalotes\_aplini\_10517\_AMNH\_109030*, *Cynopterus\_titthaechilus\_titthaechilus\_10487\_AMNH\_107921\_cranium*, *Macroglossus\_sobrinus\_sobrinus\_10425\_AMNH\_107480*, *Hipposideros\_ater\_saevus\_10796\_AMNH\_107819*, *Hipposideros\_grandis\_10840\_AMNH\_112943*, *Aselliscus\_stoliczkanus\_10808\_AMNH\_115576*, *Mops\_condylurus\_osborni\_9754\_AMNH\_115937*

Tomographic data source for prototype for *Le grand calculateur III*

Morphosource / American Museum of Natural History, New York, New York, USA

*HMS\_AMNH\_34258\_loris\_whole body*

The artist wishes to thank the Canada Council for the Arts for their research and production support as well as the Conseil des arts et des lettres du Québec for the research residency at the Québec Studio in New York in 2018.

Thank you to Nordisk Kunstnarsenter Dale / Nordic Artists' Centre Dale for the research residency in 2017, to Opekta and LAB3 of Kunst-hochschule für Medien Köln / Media Art Academy in Cologne for the workshop in 3D printing, as well as Centre Turbine for the initiation to 3D printing residency in 2014.

Thanks to Maude Lauzière-Dumas for her assistance with the construction and the installation of the works, Christian Delorme for his support, and Alain Bellehumeur for lending his equipment.

# provisional states *Vertebrata*

Diane Morin

February 2 – March 9, 2019

In recent years, I have been researching ways of making new shadow projecting systems that can generate durations—progressions, ellipses, freeze frames, slow motion, etc.—and temporal experiences that echo video and cinema editing techniques. Since 2012, I have also been working on *Le grand calculateur*, a project bringing together a series of drawings and installations that spatialize the logic of binary calculation and memory storage used in computing systems. These systems are comprised of more or less obsolete objects and electronic circuits that are assembled to create more or less functional computing systems. These installations can also be seen as a reflection on learning processes: since they keep track of my own learning experiences, errors in design and fabrication also become part of the project.

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I have recently wanted to deepen my interest in biology and the history of cybernetics, which has been present ever since the beginning of my practice. I also looked into the notion of *convergence* in biology and the idea that evolution can produce limited rather than infinite forms.<sup>1</sup> In the past year, I began to study tomographic imaging software. I worked with CT scans of specimens from natural history museum collections and made reproductions of specimens of several animal species. The objects made from these data keep the trace of the *living*; one can feel their sagging, the singularities of each individual, the wear of the bodies.

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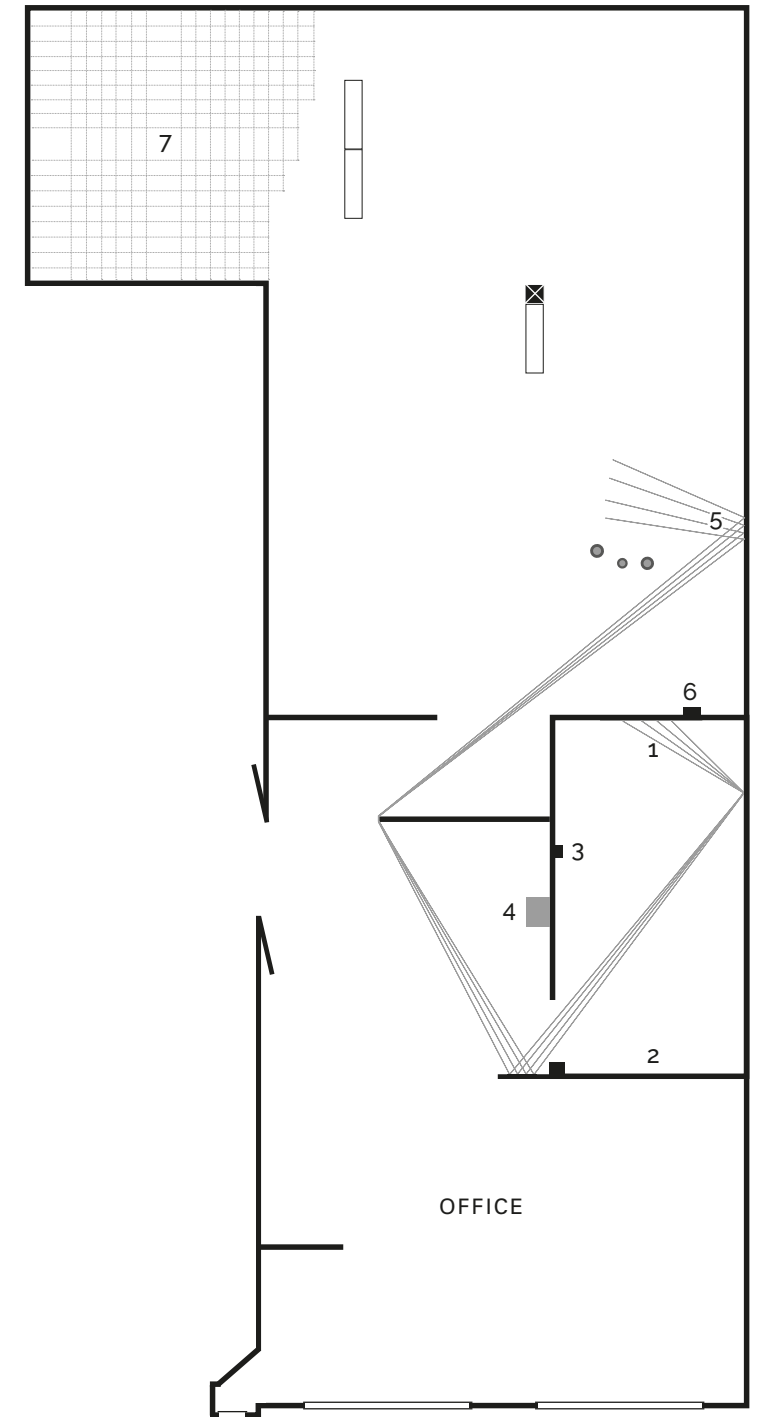
The exhibition at OBORO follows recent research in my Montreal studio as well as during residencies in Dale, Norway (2017) and New York (2018).

*provisional states (Vertebrata)* deploys an inventory of objects derived from tomographic data taken from the collection of the American Museum of Natural History in New York: scans of the primates collection and of the skulls of different bat species. It is a kinetic installation that involves historical elements from the first processes of making animated images and the history of computing. Arithmetic, kinetic, sound and light events are generated by mechanical and computing mechanisms. Lights and shadows animations—images in the making—echo video or film editing processes. It is also a laboratory/project in which the different elements can evolve and change during the exhibition, an exploration of the possibilities of assembling and re-assembling fragments, in connection with the idea of preserving an experience of nature.

Diane Morin

### Works

1. *prototype for Le grand calculateur III*  
Test tubes transformed into "water switches", electromechanical relays, plexiglas, piezo.  
The configuration of the logic gates formed by the tubes and the electromechanical relays generates a sequence of events.
2. *chiroptera*  
Inkjet prints, graphite and pencil on paper. Screenshots of volumes recreated from tomographic data.
3. sound – microphone inputs
4. *chiroptera*  
Monitor, video created from a series of images from tomographic data of skulls of various specimens of bats.
5. *prototype for Le grand calculateur III*  
Light-emitting diodes, capacitor 1000µF, resistor 10KOhms, copper wire, skeleton reproductions of a lorisids (loris tardigradus) specimen, projected shadows.
6. sound – speakers
7. *chiroptera*  
Skull reproductions of various specimens of chiroptera, projected shadows, aluminum, light-emitting diodes, copper wires, microcontroller.



1. George R. McGhee Jr., *Convergent Evolution, Limited Forms Most Beautiful*, The Vienna series in Theoretical Biology, MIT Press, 2011.