

Who made this?

Using avian forensic morphology techniques to determine the cultural identity of an ethnographic object

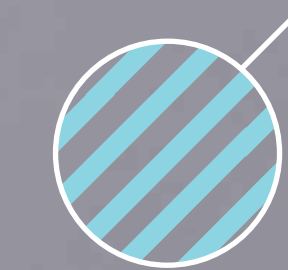
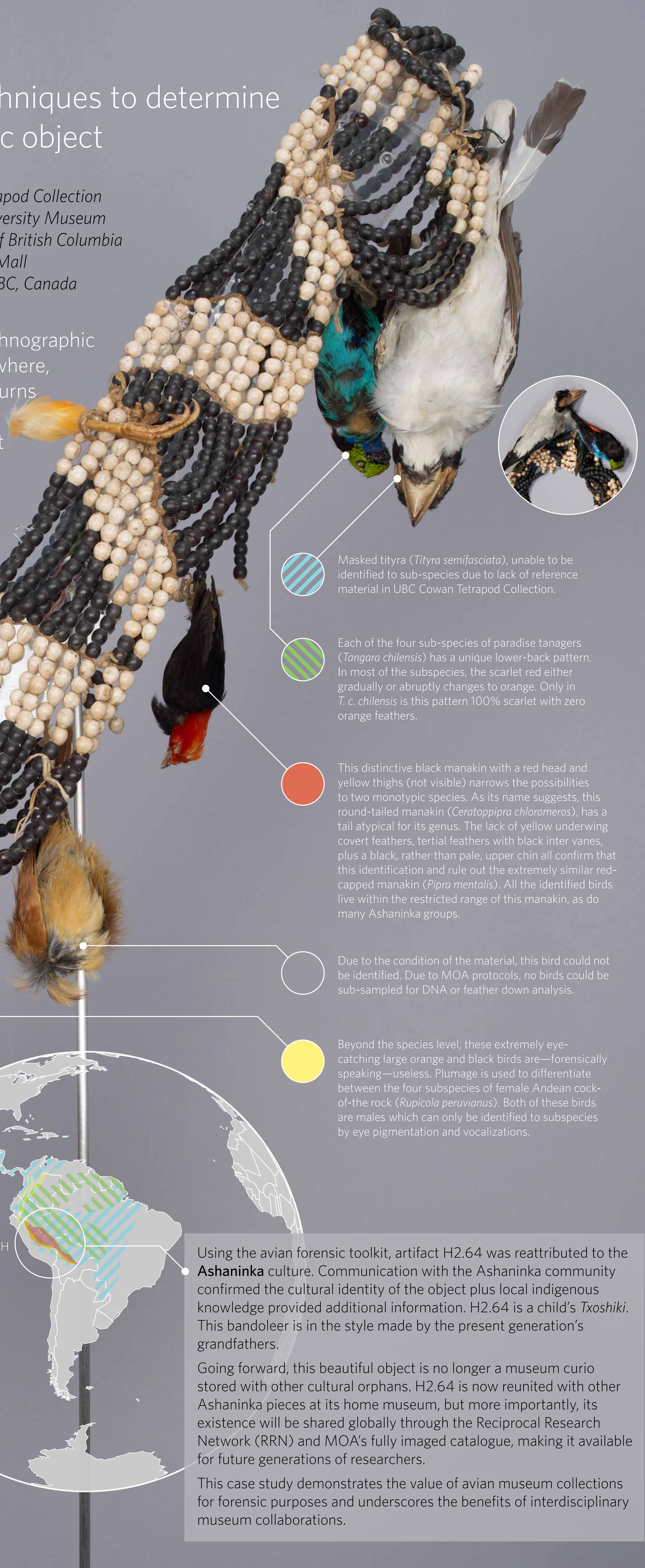
Ildiko Szabo

ildiko@zoology.ubc.ca

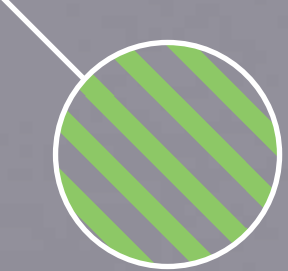
Cowan Tetrapod Collection
Beaty Biodiversity Museum
University of British Columbia
2212 Main Mall
Vancouver, BC, Canada

Museums and people's attics are chock-a-block with ethnographic objects that have little or no provenance. Not knowing where, when, and why an object was made, acquired, or used turns these objects into cultural orphans. What could be a significant cultural object is now a tourist trophy, at best a proudly displayed curio. Avian forensic morphology techniques can be used to reattribute some of these cultural orphans to their rightful cultural heritage. This case study combines the disciplines of avian forensic morphology and etho-ornithology.

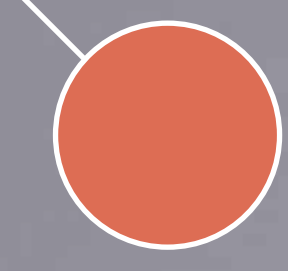
Before asking for avian forensic assistance, Museum of Anthropology (MOA) Africa & South American Curator, Dr. Nuno Porto researched the beadwork pattern of object H2.64 and did not find a cultural match. This was a needle in a haystack problem. Within Amazonia there are 385 identified indigenous groups belonging to 270+ indigenous languages. Using species-specific range maps of the identified birds significantly narrowed the search area.



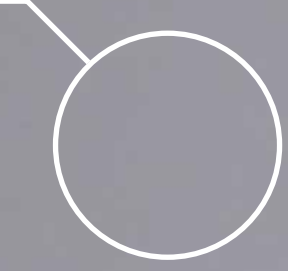
Masked tityra (*Tityra semifasciata*), unable to be identified to sub-species due to lack of reference material in UBC Cowan Tetrapod Collection.



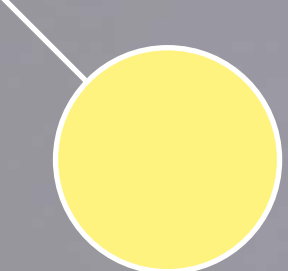
Each of the four sub-species of paradise tanagers (*Tangara chilensis*) has a unique lower-back pattern. In most of the subspecies, the scarlet red either gradually or abruptly changes to orange. Only in *T. c. chilensis* is this pattern 100% scarlet with zero orange feathers.



This distinctive black manakin with a red head and yellow thighs (not visible) narrows the possibilities to two monotypic species. As its name suggests, this round-tailed manakin (*Ceratopipra chloromeros*), has a tail atypical for its genus. The lack of yellow underwing covert feathers, tertial feathers with black inter vanes, plus a black, rather than pale, upper chin all confirm that this identification and rule out the extremely similar red-capped manakin (*Pipra mentalis*). All the identified birds live within the restricted range of this manakin, as do many Ashaninka groups.



Due to the condition of the material, this bird could not be identified. Due to MOA protocols, no birds could be sub-sampled for DNA or feather down analysis.



Beyond the species level, these extremely eye-catching large orange and black birds are—forensically speaking—useless. Plumage is used to differentiate between the four subspecies of female Andean cock-of-the-rock (*Rupicola peruvianus*). Both of these birds are males which can only be identified to subspecies by eye pigmentation and vocalizations.



Using the avian forensic toolkit, artifact H2.64 was reattributed to the **Ashaninka** culture. Communication with the Ashaninka community confirmed the cultural identity of the object plus local indigenous knowledge provided additional information. H2.64 is a child's *Txoshiki*. This bandoleer is in the style made by the present generation's grandfathers.

Going forward, this beautiful object is no longer a museum curio stored with other cultural orphans. H2.64 is now reunited with other Ashaninka pieces at its home museum, but more importantly, its existence will be shared globally through the Reciprocal Research Network (RRN) and MOA's fully imaged catalogue, making it available for future generations of researchers.

This case study demonstrates the value of avian museum collections for forensic purposes and underscores the benefits of interdisciplinary museum collaborations.

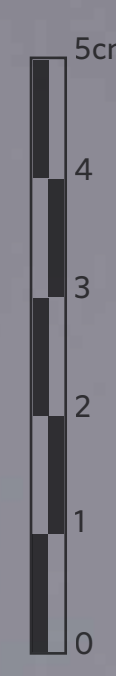


Image courtesy:
Museum of Anthropology H2.64
Photos by Kyla Bailey and Jessica Bushey (inset)

Map sources:
Wikimedia Commons
User: TUBS
[https://commons.wikimedia.org/wiki/File:South_America_on_the_globe_\(grey\).svg](https://commons.wikimedia.org/wiki/File:South_America_on_the_globe_(grey).svg)
Range maps: Bird Life International, birdlife.org

Design:
Derek Tan