

Big science: Local funding supports open access sequencing of the Puerto Rican Parrot genome

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The critically endangered Puerto Rican Parrot (*Amazona vittata*) is the only surviving parrot species native to the United States. Credit: Jose Almodovar

The critically endangered Puerto Rican Parrot (*Amazona vittata*) is the only surviving parrot species native to the United States. A genomic sequencing project, funded by community donations, has published today, in BioMed Central and BGI's open access journal *GigaScience*, the first sequence of *A. vittata*, the first of the large Neotropical Amazona birds to be studied at the genomic level.

The Puerto Rican Parrot was once abundant throughout Puerto Rico but destruction of old forest habitats to make way for farming in the 19th Century resulted in a drastic decline in their population. By the mid

1970's only a handful of individuals were thought to remain. Captive breeding programs in Rio Abajo and El Yunque and the release of these birds have had some success, but the number of these birds in the wild is still very low.

In a unique initiative (developing of the Local Community Involvement), funded entirely by contributions from the communities of Puerto Rico alongside staff and students from the Biology Department of the University of Puerto Rico at Mayagüez, researchers collaborated internationally to sequence this beautiful parrot.

Dr Taras Oleksyk, who organized the The Puerto Rican Parrot [Genome Project](#), explained their findings, "In this project we managed to cover almost 76% of the *A. vittata* genome using money raised in art and fashion shows, and going door to door asking for the support of Puerto Rican people and local businesses. When we compared our sequence of our parrot, Iguaca, from Rio Abajo to other [species of birds](#), we found that she had 84.5% similarity to [zebra finches](#) and 82.7% to a chicken, but her genome was highly rearranged."

Dr Oleksyk continued, "We are very proud of our project and even more proud to be part of a local community dedicated to raising awareness and furthering scientific knowledge of this [endangered bird](#). All the data from this project is publically available in GigaDB which we hope will be a starting point for comparative studies across avian genome data, and will be used to develop and promote undergraduate education in genome science in the Caribbean. Community involvement may be the key for the future of conservation genetics, and many projects like this are needed reverse the current rate of extinction of birds across the globe."

More information: A Locally Funded Puerto Rican Parrot (*Amazona vittata*) Genome Sequencing Project Increases Avian Data and Advances Young Researcher Education, Taras K Oleksyk, Jean-Francois Pombert,

Wilfried Guiblet, Brian Ramos, Anyimilehidi Mazo, Christina T Ruiz-Rodriguez, Michael L Nickerson, Yashira Afanador, Daniel Siu, Ricardo Valentin, Luis Figueroa, Michael Dean, David M Logue and Juan-Carlos Martinez-Cruzado *GigaScience* 2012, 1:14

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