MEDIA RELEASE

NEWS FROM THE INSTITUTE FOR MARINE AND ANTARCTIC STUDIES

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ATTENTION: Chiefs of Staff, News Directors

First family tree created for all living bird species with IMAS mathematician crunching the numbers

An international group of scientists has constructed the world's first family tree describing the evolutionary history linking all 9993 known living bird species.

This study provides a unique perspective on avian evolution and diversity. It is the culmination of five years of work by five researchers from the UK, USA, Canada and Australia and was published in today's edition of the prestigious international journal *Nature*.

The study used fossil data, DNA sequences, mathematics and supercomputers to produce the family tree describing all known living bird species. This was combined with their geographic distributions to examine regional patterns in speciation with surprising results.

Widely held evolutionary theory suggests that initial speciation in a group is rapid followed by a slowdown. When a new distinctive group is established speciation (forming of a new species) is thought to occur rapidly until all niches are filled and extinction begins to balance speciation.

In this study the reverse is shown to occur. Over time the speciation rate has actually increased – new species have been appearing with increasing frequency.

The study proved to be vastly more involved than any in the team anticipated.

"When we originally tackled this problem we expected to have the family trees within a year or two. The further we progressed the more the enormity of our

ambitious task became evident," said mathematician Dr. Klaas Hartmann from the Institute for Marine and Antarctic Science at the University of Tasmania.

However, the work has been worth it.

"Our results have uses that go far beyond understanding avian speciation. I'm excited about using these results to guide biodiversity conservation decisions."

Unfortunately while this study shows that the rate of speciation in birds is increasing, this is overshadowed by the current rate of human induced extinctions.

On-going work by the team will use the results from this study to help organisations prioritise conservation efforts.

To arrange interviews with Dr Hartmann, please contact Sam East, IMAS Communications, Outreach and Marketing Manager, on 03 6226 6683 or 0418 299 470.

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