

# Overcoming crocodile breeding hazards with AI

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The world's first artificial insemination of crocodiles is one step closer thanks to a novel project between The University of Queensland (UQ) and a central Queensland farmer.

Reproductive biologist at UQ's School of Agriculture and Food Sciences, Dr Steve Johnston, has successfully collected semen from three metre long [saltwater crocodiles](#) at the Koorana crocodile farm near Rockhampton, central Queensland and will begin [artificial insemination](#) of female crocodiles in a couple of weeks.

Dr Johnston is presenting his research findings, which include discoveries of aspects of the crocodiles' reproductive processes that were little known to science, at the Zoo and Aquarium Association Conference being held on the Gold Coast this week.

Dr Johnston is working with crocodile farmer John Lever on the project, which is supported by a \$22,000 Rural Industries Research and Development Corporation grant.

"Our work will assist crocodile farmers by improving breeding success rates and removing the risk that comes with housing large male crocodiles on farms, but will also help with the conservation of rare and endangered [crocodilian species](#) around the world," Dr Johnston said.

"Large, sexually mature male crocodiles are very aggressive and this can be hazardous for farm staff and female crocodiles.

"We are looking at methods to extract sperm from wild male populations, so there is not the necessity to have males on site in captive situations.

"If we can collect semen safely from large male crocodiles in the wild, this will also strengthen [genetic diversity](#)."

Using natural techniques that Dr Johnston described as like "tickling a crocodile", he collected samples in a pilot project last year on large males from the farm, which were temporarily sedated during the process and then safely returned to their ponds.

The researchers also learned more about the [reproductive biology](#) of males and female estuarine crocodiles via non-invasive [magnetic resonance imaging](#).

[Crocodiles](#) are ambush attackers, with the strongest bite of any animal, measured at more than 30,000kPa, almost double that of a great white shark.

Dr Johnston was part of the team that in 1998 announced the world's first koala baby born by artificial insemination (AI) of its mother.

He has also pioneered AI techniques in Barbary sheep and Banteng cattle, and is conducting similar work on the southern hairy-nosed wombat.

Dr Johnston will present his work at the Zoo and Aquarium Association Conference at 9.45am on Thursday, 30 August 2012.

Provided by University of Queensland

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