Application of artificial insemination in the emu industry will accelerate genetic improvement of desirable emu traits which would otherwise be very slow because emus are monogamous and breed seasonally. The first step in the establishment of an artificial insemination program is to find an effective method for collecting semen. We sought to develop collection methods for male emus using an artificial cloaca.

The work was carried out in May-June 1993 using individually penned males, divided into 2 groups. Group 1 was trained with females as teasers and comprised 5, 3–4 year-old males that had previous sexual experience with females. Females to be used as teasers were induced into the mating position by grabbing them from behind and using the hands to exert gentle pressure on their back so they would sit. This did not require training. Group 2 consisted of 7 first-year males that were sexually inexperienced and were trained to stimulation by the semen collector.

In the method using female teasers, the male was brought into a female’s pen and the collector encouraged the female to sit. This induced the male to display mating behaviour. The male then sat behind the female and moved on his hocks into a mating position. As he raised his body to bring his everted phallus close to the female’s cloaca, the collector used the artificial cloaca to effect erection of the phallus and subsequent ejaculation. After several successful ejaculations, the male associated the collector with the mating act and, when brought to the pen of the female, spontaneously initiated his courtship behaviour by walking behind the female and putting his neck over her back. If the male did not do so, the collector evoked interest by raising the female’s tail or by sitting her on the ground.

The second method takes advantage of the development of sexual behaviour directed towards the semen collector. After a period of taming during which the collector spent some time with the males walking in the pens, feeding them and stroking their feathers, the males started to display sexual behaviour. They attempted to mount the collector, and ejaculation into the artificial cloaca led to the formation of a bond between the male emu and the semen collector. Consequently when the collector entered the pen the male approached him and courted. The collector knelt on the ground and waited for the male to sit. When the male was in the sitting position, the collector faced him, maintaining hand contact with the male’s breast, and moved his hand down towards the soft part of abdomen just above the vent. The maintenance of tactile contact is essential to stimulate the male. The male moved forward and tried to mount the collector and when the phallus was everted the artificial cloaca was placed on it to cause erection and ejaculation.

Nine males were successfully trained to 1 of the 2 methods. Four of the 5 males from Group 1 were trained, but the fifth mounted the female’s head and, despite many attempts, could not be redirected to her tail. In Group 2, 5 of the 7 first-year males were trained successfully. Of the other 2, 1 responded to stimulation by the collector 3 times but then suddenly terminated its sexual behaviour and no longer responded to any stimuli. The remaining male showed no sexual interest and always tried to avoid the collector. The effectiveness of both methods varied between birds, but generally only a few collections were necessary for a male to become trained. Both methods take advantage of the voluntary ejaculation reflex and, as such, are not invasive or stressful and the birds adapted to them readily. These factors are important for the production of good quality ejaculates for an artificial insemination program. The training and semen collection can be done by 1 person.

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