

METHODS OF ARTIFICIAL INCUBATION OF
~~XXXXXXXXXX~~ ~~XXXXXXXXXX~~ CROCODILE (*Megachelys furtivus*) EGGS

Introduction: Concerned with the declining crocodile population and with the placement of all ^{Indian} crocodilians in the schedule I of wildlife protection Act (1972) ~~and with~~ several states ^{has} initiated crocodile conservation projects. It ^{is necessary and} ~~has become very~~ important that the results of ^{their} ~~such~~ efforts be published so that faults ^{which} ~~at~~ ^{occur} at various stages of ~~be~~ eliminated in future attempts. One of the major ^{work} ~~steps~~ in ~~the~~ all the state ^{crocodile} project is the collection ^{of} ~~of~~ wild laid crocodile eggs available and ^{incubation} ~~incubate~~ and ^{hatching} ~~hatch~~ ^{of them} artificially to eliminate the heavy ^{predation} ~~of~~ ^{of} eggs ^{in nature} ~~which~~ ^{would} ~~would~~ have happened in the wild. The ^{incubation} ~~incubation~~ ^{methods} ~~methods~~ adopted by ^{different-state} ~~various~~ project is different and understandably has given ~~different~~ ^{different} hatching percentage. In this paper two methods of artificial incubation and results is ~~given~~ ~~for~~ ~~comparison~~ over the year 1976-77 is given for comparison.

Over the years the standard accepted method of incubating crocodile eggs ^{in Africa, Australia, Malaysia, Thailand} ~~artificially~~ ^{is} ~~is~~ ^{different-established} ~~as follows~~ ^{is as follows}.

1. Incubation box method
2. Simulated nest method.

1. Incubation box method: — — —

2. Simulated nest method — — —

In 1976 while collecting wild laid crocodile eggs in Tamil Nadu we followed the incubation box method. ~~its~~ ~~or~~ ~~with~~ variation. Wild laid eggs were directly collected in the incubation boxes made of dead wood plank of the dimension 25" x 15" x 15" (approx). ^{transferred to} The Madan Shale Park Trust - at Madurai for incubation by rail & by road. The eggs were arranged layer wise, each egg about 1 inch apart from each other in every layer. Between every layer there was about 3" of nest soil. Unlike the standard incubation box where the lid is closed we kept it open ^{the boxes} to moisten and sprinkle water as and when required and also allowed sunlight to fall on them. A total of _____ nests totaling _____ eggs were collected and hatched (tablet).

In 1977, however in the A.P. Crocodile Conservation project I followed the second method i.e. simulated nest method. In May 1977 we collected crocodile eggs from the Hiran Lake of Sir forest - Gujrat and transferred them to Nehru Zoological Park Hyderabad by rail.

The eggs were collected in plastic buckets ^{with lid} arranged in rows layers marking the top side up (as they were in nest) with the nest soil. While transferring by air every railway station while changing platforms the buckets were always head carried to prevent the jarring if moved in trolley.

In the hatchery each clutch of egg was placed in a single unit of artificial nest. Each unit was 17x17 cm in dimension and each can ^{separated} be divided from other by:

loosely arranged bricks (photo 1). The each unit was full of sand. A nest-hole was made almost 2 feet deep and 1 foot wide. ^{original nest soil was then placed in the hole.} and Eggs were placed in layers touching each other as they were in nest - with the original nest soil surrounding them. ~~The~~ hole was covered up with nest soil & sand and care was taken to see that the top layer of eggs remain at least 1 1/2 feet below the surface. This helped in less evaporation of moisture from the original nest soil and also in not fluctuating the temperature of the egg chamber.

Except for covering the nest simulated nest - during ~~the~~ occasional rains we allowed ~~it~~ it to open sunlight for each normal day right up to the date of hatching (table 2)

Discussion.

November - Science Today
December - Science Reporter
January - Cheetah
February - BNTS
March - Indian Forester

SECTION IX - SPECIFIC CONTAINER AND HANDLING NOTES

CONTAINER NOTE 31

APPLICABLE TO:

Alligator
Caiman
Crocodile
Pangolin

Note: For carriage of domestic pets in passenger cabins as accompanied baggage, See Section X - Carrier and Governmental Exceptions.

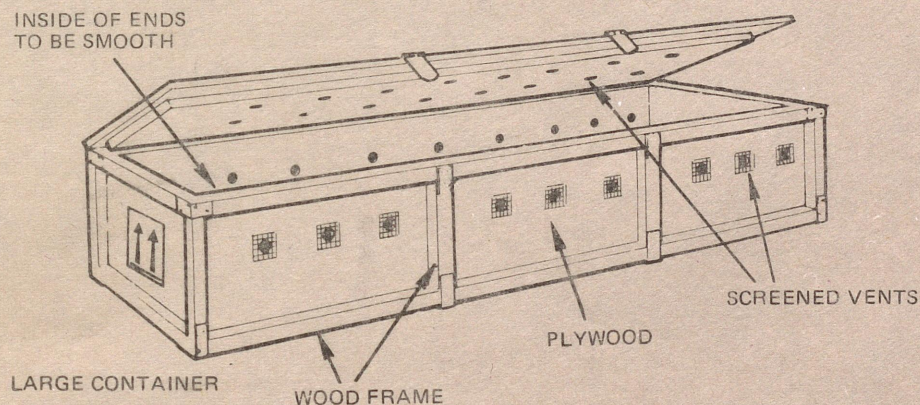
DESIGN AND CONSTRUCTION

1. MATERIALS:

Burlap, fiberboard, fine wire mesh, metal and wood.

2. PRINCIPLES OF DESIGN, which shall be met in addition to the General Container Requirements in Section VIII:

- (a) Small animals of these species can be carried in the container illustrated in Container Note 30. However, bags are not required.
- (b) Large amphibia shall be crated separately in strongly made containers just large enough to accommodate the animal:
- (i) Strong heavy framed wooden crate; dimensions restricted to prevent movement of the animal;
 - (ii) Ventilation holes at sides and two rows on the top.
 - (iii) The ends of the inside of the container shall be smooth to prevent injury to the animal's nose.



PREPARATIONS PRIOR TO DISPATCH (See Section VII)

- (a) Where necessary, moss or suitable brushwood material should be placed in the box.
- (b) Alligators and Crocodiles

Several small ones may be put together into each bag but bags should not be overcrowded.

FEEDING GUIDE (See Para. 9, Section IV)

The need to feed any of these species during the journey should not arise.

GENERAL CARE AND LOADING (See Section IV)

Special care must be taken to avoid exposure to extreme temperatures. Particularly during cold weather, these animals lie dormant for prolonged periods and, therefore, should not be presumed dead.

Containers shall not be placed in direct sunlight.

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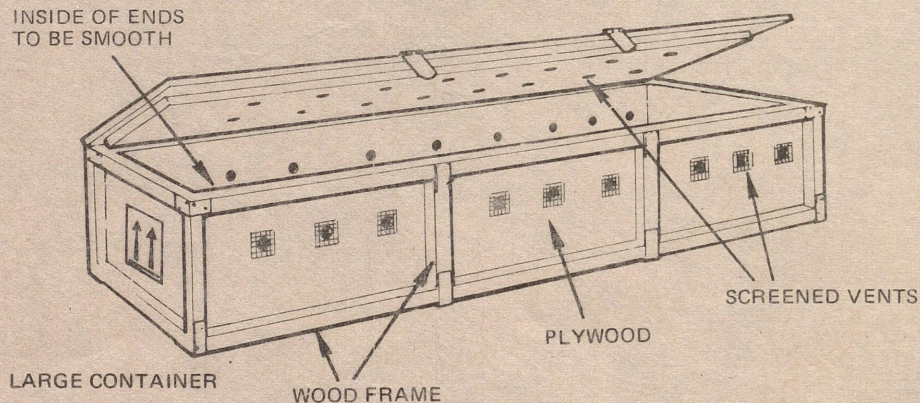
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Shifting Erodes (line)

Technique