

CHEMICAL IMMOBILISATION OF WILD BUFFALOES IN KAZIRANGA

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A research study on the ecology and population genetics of the Asiatic Wild buffalo was initiated by the Wildlife Institute in February'89. A small field based laboratory was developed near the Kaziranga National Park (KNP), Assam for carrying out electrophoretic studies using blood samples. Four distinct categories of buffaloes in and around KNP were recognised on the basis of their morphological characteristics, behaviour and place of occurrence. Chemical immobilisation of large number of representative animals of these four categories were envisaged in the project. The first phase of field operations for the chemical immobilisation was conducted in the cattle camps located on the northern periphery of the park to facilitate collection of required blood samples of wild solitary bull(s) visiting these cattle camps. Dr.S.Chowdhary, Scientist of the Institute made two attempts to immobilise wild bull using mixture of Xylazine and Ketamine drugs. Due to inadequate anaesthesia desired blood samples could not be collected. However, the animals were fully revived and monitored. Based on the experience gained during the first field

operation it was decided to use the immobilon during the second phase of field operations.

The second phase of field operations was conducted during March'92. From the Institute, Dr.P.K. Malik, Dr.S.Chowdhary, Dr.P.K.Mathur and Shri Parag Muley participated. The research team of the Kerala Agriculture University was also present. Shri B.S.Bonal, DFO, KNP, Shri R.K.Das, DFO; and Shri D.Gogoi, ACF and Forest Range Officers of KNP also took active part in coordinating the entire field operations and were present on all days for locating the desired animals, chemical immobilisation and monitoring. This time one wild solitary bull visiting cattle camp and a female in wild herd inside the park were successfully immobilised using Immobilon. Both the animals were in deep anaesthesia and hence, allowed collection of blood samples and morphometric data.

A summary of various activities during two field operations is given in table below :

S.No.	Date	Place/Site	Animal Description/ Identification	Drug mixture and dosages	Details of immobilization	Details of Sample/data Collected	Revivon Monotoring	Remarks
1.	31/12/91	Majibali Chapori (Khuti)	Wild solitary bull visiting cattle camp	Xylazine + Ketamine (900 mg + 300 mg in 3 ml)	Inadequate anaesthesia, reflexes active, on darting second dose animal got up, walked a distance and crossed water beel.	Data on drug action, and animal behaviour recorded	Animal revived. Animal monitored till late evening.	Blood sample/ morphological data not collected. Inadequate anaesthesia
2.	03/01/92	Lumsali Khuti (cattle camp)	Wild solitary Bull visiting Cattle camp	Xylazine + Ketamine 1300 mg+400mg in 4 ml dart	Inadequate anaesthesia for approaching animal-Active reflexes.	Data on darting, drug action animal behaviour recorded upto 1 hr 41m after the first darting.	Animal revived safely and monitored	No blood sample/ morphological data collected
3.	05/03/92	Near Bahubil Tower (Raumai beel) in KNP	Wild Adult Male in Park	Immobilon (7 ml) dart at 1049 hrs from vehicle on a distance of 30-35 mts.	Animal came in lateral re-cumbancy after 30-35 mts. Inadequate anaesthesia for collection of blood samples	Data on darting drug action and animal behaviour recorded	Revivon (10ml)I/M by hand at 1135 hrs Animal got up after 10 min. and monitored till late afternoon.	No blood sample/ morphological data collection A successful attempt in using the Immobilon, revivon fast action No adverse action

S.No.	Date	Place/Site	Animal Description/ Identification	Drug mixture and dosages	Details of immobilization	Details of Sample/data Collected	Revivon Monitoring	Remarks
4.	07/03/92	Murkhowa Khuti (Cattle camp)	Wild Solitary Adult Male visiting cattle camp	Immobilon (12.5 ml) I dart 7ml at a distance of 15 m from a hide II dart 3ml at a short distance III dart 2.5ml by hand	Darting operation from 0925 hrs onwards, Revivon (15 ml) I/V at 1034 hrs. Animal was in deep anaesthesia	Data on drug action, animal behaviour, Blood samples, morphometrica data collected.	Revivon (15ml)I/U After injecting revivon Animal took 13 min to	Animal monitored till next day. Normal and marked with fluorescent paint
5.	10/03/92	Bahu beel field	Wild adult female in Herd, in Park	Immobilon (15.5ml) I-6.5 ml, distance 35m from vehicle II-5.0 ml from elephant back III-4.0 ml by hand	Darting operation began at 1007hrs. At 1107 hrs animal was calm and allowed collection of blood samples, morphometric data. Revivon (15ml)I/V at 1126 hrs.	- do -	Revivon (15ml)I/V at 1126 hrs. At 1128 hrs. animal was fully revived, Later on animal joined with other herd animals, Also monitored.	Safe revival collection of samples and data.

विगुणेष्वपितु खलुएतेषु जनपदोद्ध्वंशन करेषुभावेषुभेषजेनोपपाद्य
मानानां न भयं भवति रोगभ्यशति ।

Vigūṇeṣvapitu khalueteṣu janapadoddhvaṅśan kareṣubhāveṣu
bheṣājenoopapādyā mānānām na bbhayam bhavati
rogabhyaśagti.

(Caraka Samhitā, Vimānsthāna, 3.2)

The destruction of forests is most dangerous for the nation and human beings. Vanaspati has direct relationship with the well-being of the society. Due to the pollution of natural environment and the destruction of the forest many diseases crop up to ruin the nation. Only then vanaspati with medicinal qualities may enhance the nature and cure diseases of human beings.