GAJAH 18: 61-62

COMMENT ON REPRODUCTIVE PERFORMANCE OF TIMBER ELEPHANTS IN MYANMAR

A Christy Williams & A.J.T. Jonsingh
Wildlife Institute of India,
P.O. Box 18, Dehra Dun - 248 001 India

We read with much interest the paper by Schmidt & U Mar (1996) on the reproductive performance of captive Asian elephants in Myanmar. After perusing through the various Tables and Figures given by the authors, we wrote this note to compare the present day situation of Myanmar Timber Enterprise (MTE) elepahnts with those during the days of U Toke Gale (see Caughley, 1995). We have not had the opportunity to read U Toke Gales' book on *'Burmese Timber Elephant'* and therefore the mortality rates were taken from Caughley (1995) and recalculated to make the comparison with Schmidt & U Mar (1996) Figures valid. Two points stood out immediately. The first is regarding mortality rates in the 0 - 17 year age class (see Table 1). Our understanding is that MTE elephants are under the best possible veterinary supervision, which is probably more modern now than it was during U Toke Gale's period. Even though the mortality rates are only approximations based on Caughley's (1995) calculations, there still seens to be a big difference in the 0 - 17 year age class between then and now. It is our understanding that much of the mortality in the 0 -17 year age class is contributed by 0 - 5 year age class. It would be interesting to know the reasons behind such a pattern. Another interesting comparison would be to compare the mortality rates of calves (0 - 5 yr) born to captive born mothers and wild caught mothers.

TABLE 1

Mortality rate of MTE elephants

Age Class	*MORTALITY RATE (%)*	
	[1] U TOKE GALE (1974)	*1991 TO 1995[2]*
0 - 17	0.9	3.46
> 18	3.82	3.55

[1] from Caughley (1995)

[2] from Schmidt & U Mar (1996)

The second point that stood out was the reduction in the calving interval. Caughley (1995) calculated a figure of 18.9 years for MTE cows from an area called Prome. The study by Schmitd & U Mar (1996) gave an average calving rate of 7.1% between 1991 and 1994. This indicates that average calving interval is now around 14.08 years for MTE elephant cows; a decrease of 4.82 years in the calving interval. The Myanmarese veterinary doctors in charge of MTE elephants should be congratulated for achieving such a result. Schmidt & U Mar (1996) concluded their paper by emphasising the need for improving the calvivng rate (by using captive breeding techniques such as artificial insemination) and the need to reduce calf mortality. Caughley (1995) also reached the same conclusion regarding the need to improve the calving rate back in 1980, i.e. 16 years ago. The point we wish to emphasize here is that Caughley's conclusions based on rough approximation of the survival and fecundity schedules are still valid today. Simple and robust techniques like deterministic life table analysis, carried out with the help of a hand held calculator, are valuable tools even in these days of computers and statistic models.

REFERENCES

Caughley , G. 1995 Comments on elephants in Burma. *Gajah* 14: 1- 9

Schmidt, M.J & U Mar, K 1996. Reproductive performance of captive Asian Elephants in Myanmar. *Gajah*. 16: 23- 42