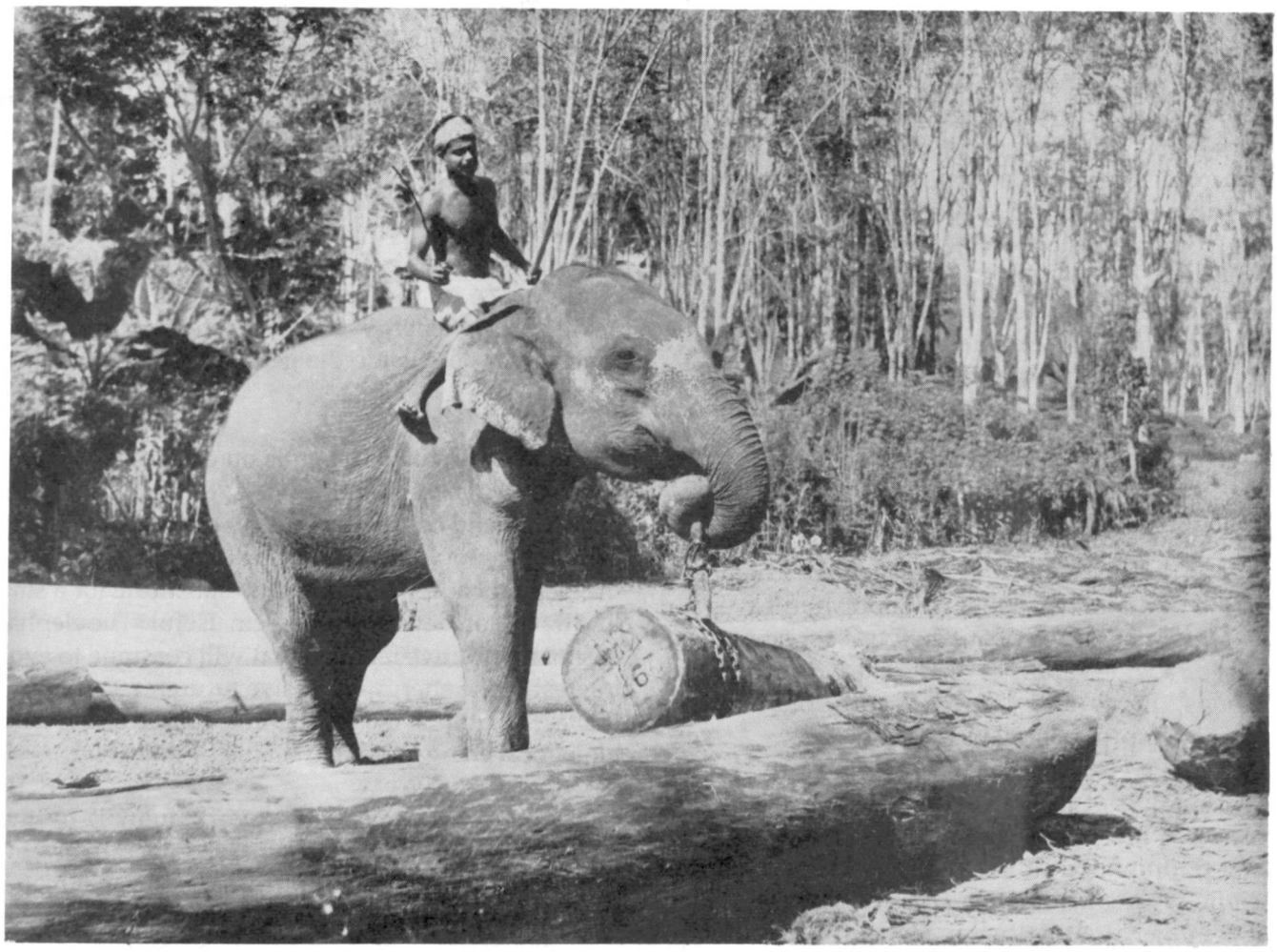
ELEPHANTS IN SRI LANKA



THE elephant is probably one of the best known, yet least utilised animals capable of draught or other physical work. It has been used in the service of man from prehistoric times. The earliest historical record is that of the Mahavamsa which states that in 483 B.C., the Royal South Indian bride of King Vijaya brought here a number of elephants from India as part of her dowry.

The first recorded use of elephants in Sri Lanka was in war. The historical records demonstrate an evolution in versatility and numbers from the buffalo hide armoured elephant Kandula to the cavalry of 2,200 elephants commanded by King Rajasingha I. Kandula battered down the gates of the invading army's fortress while Rajasingha's elephants were used against the Portugese in 1588 A.D.

Commercially too, the elephant has figured largely in the history of Sri Lanka. Aelian records the regular supply of elephants in specially constructed boats from Sri Lanka to India. Mannar was the shipping port which had shipped elephants to the world from 200 B.C. By 6 A.D. many records exist to demostrate that Sri Lanka had a well established trade in both the import and export of elephants. In fact,elephants were once such an important commodity, that in 1165 A.D. King Parakrama Bahu I invaded Burma when her King obstructed his

envoys from purchasing Burmese elephants according to well established custom.

Such a large military and commercial interest in any animal over this long period of time would have yielded a great wealth of information on its management and medication practices. Much of this information was lost when libraries were burnt during the colonial period. This trend continues even now, with the apathy demonstrated towards the traditional experience in the colonial period. But much still remains. The first research to demonstrate the existence of such a body of information was undertaken by the Late Dr P. E. P. Deraniyagala who has presented translations of ancient ola manuscripts on many aspects of management and dedication. Sophisticated teaching models made of brass that rocked on numerous joints were used in the comprehension of the elephant. The various pressure points for controlling the living animal were marked on it and the pressure of a pin on the appropriate center would make the model respond much like a live animal. This wealth of traditional information is a valid base for any authority seeking to manage the elephant.

The handling and maintenance of an elephant requires the work of a three man team. one man being the ' mahout ' or handler, the other two being charged with food supply. In a man-managed environment it takes the labour of two people to supply the leaves and grass required by an elephant daily. As this animal can subsist on a wide variety of plants like bananas, palms, bamboos, Ficus and Jak, the traditional village environment provides all its forage needs.

The handling of an elephant is done by a trained man known as a ' mahout '. The training of mahouts also has a long tradition, but it is not a rigourous or arduous discipline as elephants are but easily trained. Here too, much information is being lost with no attempt to record or otherwise perpetuate the traditional knowledge.

The value of elephants as draught animals has been appreciated until about the middle of the 1800's. The Ceylon Government then continued to maintain a stud of about sixty animals as well as a herd of over two hundred and forty work animals attached to various public departments throughout the land. The information generated during this period still exists and is sufficient to serve as a nucleus for an effective programme in animal husbandry now. The government owned herd dwindled with the advent of steam and fossil fuel energy. The availability of cheap, abundant energy reduced the importance of elephants for work, so that by the 1900's they were only circus, zoo or jungle animals. Despite the history of their utility, on breeding programmes or animal husbandry research were ever funded to develop this potential work animal.

Today the energy scenario has changed. The era of cheap energy and plentiful resources is over. The price of fossil fuel energy has risen twenty fold over the last twenty years. The cost of manufacture and operation of large work machines has also increased. A comparison of the costs of machinery that can perform the work equivalent of an elephant (Table II) suggests that the elephant is economically more feasible. But the most appealing aspect is only visible when a comparison of the origins of energy input is undertaken (Table III). In this Table the term " internalised energy source " refers to sources of energy that lie within the geopolitical boundaries of any nation, and it follows that " externalised energy source " refers to sources of energy that lie outside the geopolitical boundaries of any nation.

The more a nation depends on externalised energy sources to maintain and process, the more must that nation depend on the good offices of other states for its continued supply. In this context, the development of the elephant as a work animal to substitute for a small lift/tractation device would seem useful. The elephant has many positive features that will continue to evoke interest in the energy expensive future. Two such, are the facts that: it is the largest unit source of terrestrial biologocal energy and that it is self-replicating.

Elephants excel over other work animals by their intelligence and ability to work co-operatively in a complex manner, without human supervision. Emerson Tennant commenting on a pair of working elephants in Colombo states : " Two elephants employed in piling Ebony and Satinwood in the yards attached to the Commissariat stores at Colombo, were so accustomed to their work, that they were able to accomplish it with equal precision and with greater rapidity than if it had been done by their conjoint efforts to raise one of the heavy logs of Ebony to the summit, they had been taught to lean two pieces against the heap, up the inclined plane of which they (then) gently rolled the remaining logs and placed them trimly on top ".

Elephants have been used extensively in timbering, haulage and road building, though presently they have also been employed in assisting high tech industry by drawing under-sea cables or positioning heavy transformers etc. An average Sri Lankan elephant can drag

a load of 1–2 tons over a short distance and can move loads of 1,000 lbs over distances of 1 mile per day. Its estimated rate of travel is about 4 miles a day on paved roads. Elephants are especially useful to provide tractation in areas too soft or steep for wheeled vehicles. Even today these animals are used for the job of timber hauling on terrain too rough for tractors. The height of the animal, and its effective use of the trunk, allows for lifting and manouvering operations that would be impossible to perform without sophisticated equipment. Once developed as a work animal, elephants could make a significant impact on the village economies of many tropical countries.

The burning question is,will elephants still be with us when their unique work potential becomes valuable ? Again, history does not provide any optimistic forecasts. Almost the entirety of the elephants that have been used in Sri Lanka have been caught from the wild.

Hardly any have been bred in captivity and this remains true to date. The greatest source of elephants over a millenium were the mountains and wet forests of the south-west quarter. This area being the preferred habitat of the elephant. The vast forests of these areas remained largely undisturbed by man until about a century and a half ago. Today the elephant has been all but exterminated from its original habitat. The plantation crops of coffee, tea, rubber, cocoa and coconut have now replaced the original vegetation.

TABLE I

Elephant Conservation Projects in Sri Lanka —Funded and Awaiting Funding for Period 1981–1993

	(In U.S. $)	
	Funded	*Awating Funds (priority)*
Translocation	8,000	65,000
Habitat Management	75,000	90,000
Captive Breeding Radio Equipment	75,000	
Education	16,000	
Training	75,000	
Radio Tracking (Conventional)		23,500
Radio Tracking (Automatic)		125,000
Aerial Support	20,000	
Planning		
(a) Wasgamuwa-MaduraOya-Galoya	11,850	
(b) Galoya-Lahugala-Yala.		11,000
(c) Elsewhere	11,000	
TOTAL	216,850	344,00

Source: Tiger Paper, Vol. VII, No. 4. pp 25.

The elephant population of the present day are the refugial lowland remnants of Sri Lanka's once prodigious elephant population.

To make matters worse, many poorly planned development schemes are constantly cuting the existing remnants into even smaller, scattered herds. Given this pattern it is only a question of time until the extinction of the elephant occurs in Sri Lanka.

Unless its role as a work animal is realised and well funded programmes for breeding and veterinary research are initiated, the elephant may not have much time left. As a wild animal it may live on, if only to serve our anthropocentric ends. However, as a source of biological energy it has no equivalent on the planet, while the traditional knowledge of its maintenance and management becomes invaluable information for the effective utilisation of this resource.

TABLE II

As at 1985

*Tractation Mode**	*Cost per Unit*	*Operation Code*	
		Operator's Salary	*Maintenance/ Operation*
	Rs.	*Rs.*	*Rs.*
Working Elephant	300,000–400,000	50–100 per day or app.1,500 per month	25–90 per hour
Buldozer D40/D4 type	1,400,000–1,600,000	150 per day or 700 per month + 15 per work hour	160–250 per hour
Fork Lift Truck 5-ton capacity	600,000–750,000	40 per day or 600 per month + 10 per work hour	75 per hour

* Computed at 4 hours operation per working day.

Source : Dimos, United Tractor, National Zoo, Private Research.

TABLE III

Status of Energy use in various Tractation Modes

Tractation Mode	*Internalised Energy*	*Externalised Energy*	*Is Unit capable of being made locally*
Elephant Purchase	100%	—	Yes
Elephant Maintenance	100%	—	Yes
Buldozer Purchase	—	100%	No
Buldozer Maintenance	—	100%	No
Fork Lift Truck Purchase	—	100%	No
Fork Lift Truck Maintenance	—	100%	No

References :

Deraniyagala, P.E.P., 1955. *Some Extinct Elephants, their relatives and the two living species.* Cey. Nat. Mus. Publication.
Tennant J. Emerson 1861. *Sketches of a Natural History of Ceylon.* Longmans, London.