24. On Longevity and Relative Viability in Mammals and Birds ; with a Note on the Theory of Longevity. By P. Chalmers Mitchell, M.A., D.Sc., LL.D., F.R.S., Secretary to the Zoological Society of London.

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Introduction.

Animals are mortal, and we know that death comes to them after durations of life that differ much in different individuals and species. Unfortunately, except in the rarest cases, it is impossible to obtain information as to the duration of life in wild animals. Enquiry into the frequency of death in domesticated

UNGULATA.

1. Perissodactyla.

RHINOCEROTIDÆ.

	No. of Indiv.	Av. dur. in months.	Max. dur. in months.
Rhinoceros, whole genus	10	110	342
R. bicornis (Two-horned African Rhinoceros).	1	271	271
R. lasiotis (Hairy-eared Rhinoceros)	3	132	342
R. sondaicus (Javan „)	1	130	130
R. sumatrensis (Sumatran „)	4	7·5	17
R. unicornis (Indian „)	1	281	281

Rhinoceroses, like Elephants, are large vegetable-feeding mammals, with in proportion to their size a relatively low potential longevity and viability. The maximum duration in this record, nearly 29 years for a so-called "Hairy-eared" example, has since been surpassed by an Indian Rhinoceros which died after a duration of 40 years in our Gardens, and probably therefore at an age of at least 42 years. The number of examples in the record is not sufficient to make averages useful, but these and information I have received elsewhere make it clear that the viability is not good, and probably lower in the case of the African species.

TAPIRIDÆ.

	No. of Indiv.	Av. dur. in months.	Max. dur. in months.
Tapirus americanus (American Tapir)	13	43	188
T. indicus (Malay Tapir)	2	4	5

The record of over 15 years for an American Tapir no doubt is under the potential longevity of these animals, but I can find no reliable information from other sources. The very low figures for the Malay Tapir refer only to two individuals, and there is no sufficient reason to suppose that the Asiatic species is less viable than the American. It must, however, be inferred that Tapirs in regard to their size are short-lived creatures with low viability.

EQUIDÆ.

	No. of Indiv.	Av. dur. in months.	Max. dur. in months.
Equus, whole genus	21	116	346
E. hemionus (Kiang)	1	220	220
E. hemippus (Asiatic Wild Ass) (=*hemionus indicus*).	3	82	169
E. onager (Onager)	2	198	219
E. somalicus (Somali Wild Ass)	1	16	16
E. tæniopus (African Wild Ass)	3	175	232
E. quagga (Quagga)	1	346	346
E. burchelli (Burchell's Zebra)	7	98	268
E. grevyi (Grevy's Zebra)	2	6	10
E. zebra (Mountain Zebra)	1	46·5	62

It is well-known that the usual duration of life in horses is from 15 to 30 years, and somewhere about 50 is probably the potential