

different menageries would differ. Indeed, some animals in our Zoological Gardens have become more productive since the year 1846. It is, also, manifest from F. Cuvier's account of the Jardin des Plantes,<sup>11</sup> that the animals formerly bred much less freely there than with us; for instance, in the Duck tribe, which is highly prolific, only one species had at that period produced young.

The most remarkable cases, however, are afforded by animals kept in their native country, which, though perfectly tamed, quite healthy, and allowed some freedom, are absolutely incapable of breeding. Rengger,<sup>12</sup> who in Paraguay particularly attended to this subject, specifies six quadrupeds in this condition; and he mentions two or three others which most rarely breed. Mr. Bates, in his admirable work on the Amazons, strongly insists on similar cases;<sup>13</sup> and he remarks, that the fact of thoroughly tamed native mammals and birds not breeding when kept by the Indians, cannot be wholly accounted for by their negligence or indifference, for the turkey and fowl are kept and bred by various remote tribes. In almost every part of the world—for instance, in the interior of Africa, and in several of the Polynesian islands—the natives are extremely fond of taming the indigenous quadrupeds and birds; but they rarely or never succeed in getting them to breed.

The most notorious case of an animal not breeding in captivity is that of the elephant. Elephants are kept in large numbers in their native Indian home, live to old age, and are vigorous enough for the severest labour; yet, with a very few exceptions, they have never been known even to couple, though both males and females have their proper periodical seasons. If, however, we proceed a little eastward to Ava, we hear from Mr. Crawford<sup>14</sup> that their "breeding in the domestic state, or at least in the half-domestic state in which the female elephants are generally kept, is of everyday occurrence;" and Mr. Crawford informs me that he believes that the difference must be attributed solely to the females being allowed to roam the forest with some degree of freedom. The captive rhinoceros, on the other hand, seems from Bishop Heber's account<sup>15</sup> to breed in India far more readily than the elephant. Four wild species of the horse genus have bred in Europe, though here exposed to a great change in their natural habits of life; but the species have generally been crossed one with another. Most of

<sup>11</sup> Du Rut, 'Annales du Muséum,' 1807, tom. ix. p. 120.

<sup>12</sup> 'Säugethiere von Paraguay,' 1830, s. 49, 106, 118, 124, 201, 208, 249, 265, 327.

<sup>13</sup> 'The Naturalist on the Amazons,'

1863, vol. i. pp. 99, 193; vol. ii. p. 113.

<sup>14</sup> 'Embassy to the Court of Ava,' vol. i. p. 534.

<sup>15</sup> 'Journal,' vol. i. p. 213.