

III.V The web of life

The “Web of Life” is now a familiar concept. The delicate spider’s web is an excellent metaphor for the fragile strands that connect all living things, some directly, some more distantly, but all connected. The Web of Life, however, is infinitely more complicated than the even the most sophisticated spider’s web and the more we learn about life on earth and the global crisis it is facing, the more we see that these problems are also interrelated and interconnected. Third world poverty and debt, habitat destruction, global warming, over-population, and the extinction crisis are all woven together within the very structure of the web.

This year’s EAZA campaign focuses on just a few strands of this web: rhinoceroses. Of the five rhinoceros species surviving into modern times, four are facing extinction. The tragic story of the rhinoceros is a simple one; early in their evolution, during the late Miocene or early Pliocene they developed horns. This evolutionary development may have been what led to the peak of their diversity, but around 15 million years later it led to their wholesale slaughter.

Rhinoceroses are huge mega-herbivores and impact greatly on their environment by shaping the landscape. The browsers each feed on more than 200 species of plants. By forcing through thick scrub and forest like a tank, they open up access for other species and, by continuously browsing shrubs and small trees, rhinos shape the way they grow and keep them short and accessible to a whole range of smaller leaf eaters. The seeds rhinos eat take three days to pass through their gut and so when passed out – in their own, ready-made pile of fertiliser – they may be many kilometres from the parent plant. The dung also enriches the soil, returning vital nutrients and organic matter that improve the soil structure for the plant communities, as well as feeding whole communities of soil organisms that are the foundations of an ecosystem. The dung piles, known as middens, of rhinos also attract a great variety of animals: those that directly use or eat the dung such as dung flies and dung beetles; and those that feed on the invertebrates that are attracted there, including lizards, many birds such as flycatchers and hornbills, and many kinds of other insectivorous animals.

All rhinos are extremely fond of wallowing and will dig to create wallows for themselves. These then become used by many different species for bathing and drinking, and become breeding sites for animals that require small pools of open water to complete their lifecycles, such as frogs, many insects and a huge array of other invertebrates. Rhinos are great diggers and excavate minerals from the ground using their horns and feet. This provides an important service for those species requiring, but unable to open up, the earth for themselves.

It just takes a little imagination and research to link rhinos to any other part of the Web of Life, and this Information Pack should help you do this.