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Developing conservation and domestication strategies for the endangered scrambling shrub (*Caesalpinia bonduc* (L.)Roxb.) in Benin (West Africa)

Species: Scrambling shrub
Caesalpinia bonduc (L.)Roxb.

IUCN Status: Endangered

Country: Republic of Benin, West Africa

Organisation: University of Abomey-Calavi



The scrambling shrub, *Caesalpinia bonduc* is under threat due to over exploitation. This plant is highly valued by the people in West Africa. Its hard seeds are roasted, ground and then boiled for medical treatments including a diuretic for diabetes and a cure for malaria. The seeds are also used in a traditional African game called Adji widely played throughout West Africa and India. However, the main threat is over harvesting of the roots which are used to treat prostate gland disease in Africa. Without intervention there is a very real chance that this plant will become extinct in Benin in the near future.

Dr Achille Assogbadjo and his experienced team aim to find out more about this valuable plant as there are currently no scientific records held for this species. This project will collect information from the local indigenous people in the rural areas and combine it with DNA analyses of the plant. The genetic and physical variation in the populations of the shrub will be compared with the localities where the shrub is found. This will inform any decisions made about conserving the species. If there is a wide range of variation between the different localities then this genetic diversity needs to be maintained by conserving these plants in situ in a large number of well distributed locations. However if there is little diversity between the different populations then it may be enough to conserve fewer larger areas of shrub. The distribution of the species in Benin will also be mapped to give a better idea of how scarce the populations are.

Once the genetic diversity is established plans can be made to propagate the plant from seed and cuttings. Depending on the variation between populations, seeds and cuttings will be collected from a range of existing populations to maintain the gene pool. Experiments will be undertaken at various locations on how to grow the shrub most efficiently. Information will be collected on a number of issues such as the most suitable growing medium, the ideal conditions and how to stop the seed being dormant i.e. removing the hard case so it can germinate. The scrambling shrub will be conserved in situ but the strategy will be strengthened if it can also be conserved ex situ by domesticating the plant. By cultivating the plant for its medicinal properties it will relieve the pressure on the wild populations.

