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The conservation genetics of three Sulawesi ungulates

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The Sulawesi warty pig (Sus celebensis), babirusas (Babyrousa babyrussa ssp.) and anoas (Bubalus sp.) are endemic to the island of Sulawesi in Indonesia (part of the Wallacea bioregion and a hot spot for biodiversity). These (threatened) species are subject to similar conservation challenges, in situ and ex situ. Habitat fragmentation due to deforestation, illegal logging and bush fires may decrease their genetic variation, which in turn can lead to a loss of ability to respond to environmental change. Besides assessing genetic diversity, genetic analyses of populations can detect possible hybridisation and reveal population structure. As the genetics of all three species are little known, the Sulawesi Ungulates Genetics project was initiated. Samples of wild and captive populations were analysed for microsatellite and mitochondrial DNA markers. The preliminary results show different levels of genetic diversity in wild and captive populations, hybridisation and significant population structure according to geographical locations. These genetic data will be valuable for the further development of Conservation Action Plans and the management of breeding programs.