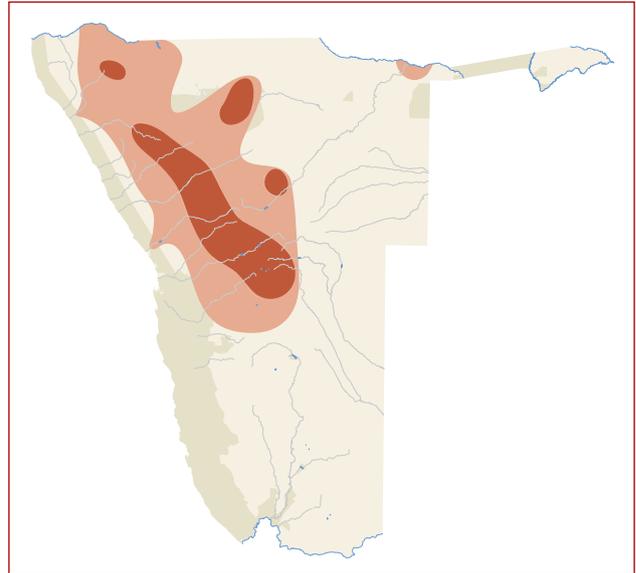
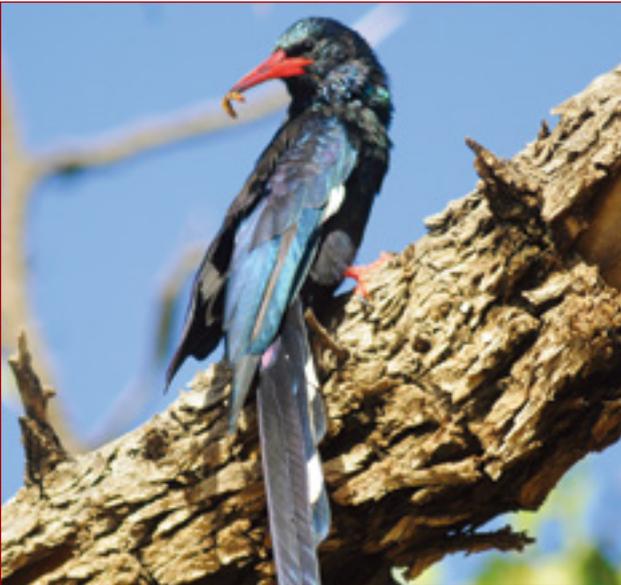


VIOLET WOOD-HOOPOE | *Phoeniculus damarensis*

RE Simmons | Reviewed by: M Paxton

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Conservation Status:	Endangered, near-endemic
Southern African Range:	North-western and central Namibia
Area of Occupancy:	36,000 km ²
Population Estimate:	1,850 birds, up to 530 pairs
Population Trend:	Stable to declining
Habitat:	Escarpment rivers and surrounding arid savannah
Threats:	Hybridisation with Green Wood-Hoopoe, wood-collection

south to Rehoboth and west into the ephemeral rivers of the escarpment into Kaokoland (du Plessis 1997). It occurs in similar dry woodland in Angola, up to Bengo along the coastal plain (Dean 2000), in areas receiving less than 500 mm of rainfall per year (du Plessis 1997). Rainfall explained 55% of the variation in density of birds recorded by Jarvis & Robertson (1999), and the highest reporting rates in SABAP1 were from the eastern (wetter) edge of the Namibian escarpment (Jarvis & Robertson 1999).

The Namibian population is estimated at 1,850 individuals (Jarvis & Robertson 1999), making it by far the rarest of the Namibian near-endemics; the estimate includes the areas west of the known and well-atlased areas. Because of its co-operative group-breeding ecology, this population estimate corresponds to between 430 and 530 breeding units (du Plessis *et al.* 2007).



DISTRIBUTION AND ABUNDANCE

This colourful and noisy species is near-endemic to southern Africa, and specifically to north-west and central Namibia and the south-western parts of Angola (du Plessis 1997, Dean 2000). It occupies an area of 36,000 km² in Namibia, of which only 8,200 km² (23%) is conservation area (Jarvis *et al.* 2001). By extrapolating to areas with similar habitat variables, Jarvis & Robertson (1999) predicted that its true area of occupancy, including in Angola, is closer to 93,000 km² and that it extends farther west than currently atlased.

In Namibia, it is thinly spread from the central regions of Etosha National Park and the Waterberg Plateau Park



ECOLOGY

The Violet Wood-Hoopoe prefers arid woodland habitat closely associated with dry rivers. It breeds from December to April, but birds feeding young in November (Jarvis *et al.* 2001) suggest they may be multi-brooded when conditions are good (du Plessis *et al.* 2007), perhaps when early rains generate a flush of insects. It nests in large hollow trees in riverine areas (du Plessis *et al.* 2007) and can be induced to breed in nest boxes (two records: du Plessis *et al.* 2007). Breeding records from Namibia (n=11) indicate that three to five eggs are laid (mean = 4.1) in February and March (Brown *et al.* 2015),

and one to four young are produced (Jarvis *et al.* 2001, RE Simmons unpubl. data). There are no data on breeding success or the dispersal of young.

It forages through riverine trees by probing into cracks and crevices of large and dying trees and also makes its way into surrounding *Acacia* woodlands; more so than the Green Wood-Hoopoe (Red-billed Wood-Hoopoe) *P. purpureus* (du Plessis *et al.* 2007). It forages and roosts in structured groups comprising a breeding pair and helpers numbering from two to five birds, with a mean group size of 3.5 to 4.3 (Robertson *et al.* 1995, Jarvis & Robertson 1999, du Plessis *et al.* 2007). It feeds on insects, including beetle larvae, caterpillars, termites and small geckos (du Plessis *et al.* 2007), usually from trees and rarely from the ground (du Plessis *et al.* 2007).



THREATS

The main threat to this species arises from the interbreeding that occurs between this species and the Green Wood-Hoopoe. This has been inferred in places such as Etosha National Park, Waterberg Plateau Park, Omaruru and Hobatere, where mixed groups of (coppery-mantled) Violet Wood-Hoopoe and (green-mantled) Green Wood-Hoopoes have been seen together (du Plessis *et al.* 2007, S Braine, M Paxton pers. obs.). This was confirmed by the genetic work of Cooper *et al.* (2001) who found close genetic similarity between a phenotypically hybrid bird and phenotypically coppery- and green-mantled birds. The Violet Wood-Hoopoe also suffers from the collection of firewood from riverine and surrounding habitat by local people. The effects are unstudied, but it probably reduces the quality of foraging habitat within its range and may reduce the number of hollow trees essential for roosting (du Plessis *et al.* 2007); this may expose family groups (that roost together) to a higher risk of predation.



CONSERVATION STATUS

This species is classified as *Endangered* in Namibia because of its extremely small population of about 1,850 individuals, which is being compromised by hybridisation on the eastern edge of its range, suggesting a decline in pure types. There is no direct measure of decline, but the habitat in which it occurs may have become degraded as wood-cutting and wood collection occurs commonly within its range (C Boix-Hinzen unpubl. data). It is not considered globally threatened (IUCN 2012a), despite its endemic status, highly restricted range and very small population and has no conservation status in Angola, where it inhabits an area that has relatively low population pressure. In Namibia, it occurs in several conservancies, but the sustainable use of wood, i.e. the collection of dead wood, in these areas may not be compatible with the wood-hoopoe's survival. This is one of the priority species

for conservation in Namibia because it is the rarest and most threatened of all the near-endemics and needs to be accorded *Specially Protected* status under any updated or future Parks and Wildlife legislation.



ACTIONS

Understanding how fuel wood collection impacts the ecology of this species and then mitigating these impacts – which may be greatest in rivers where birds roost and breed – is one of several conservation priorities. Further research on critical and limiting aspects of the bird's ecology and especially its population size in different types of woodland will help to prioritise areas for conservation action. The use of long, narrow nest boxes, placed away from rivers in the central and eastern margins of its range, may reduce interbreeding between Violet Wood-Hoopoes and Green Wood-Hoopoes, because the latter prefers riverine woodland over the non-riverine areas favoured by Violet Wood-Hoopoes (du Plessis *et al.* 2007). This may also increase population sizes, which are currently limited by the availability of appropriate breeding trees and roosting sites. Until genetic sampling of other *Phoeniculidae* can clarify the uncertain taxonomic status of this species, a cautionary approach should be applied in terms of its conservation. Among conservation actions to be put into force is the registration of this species as globally *Endangered*, since it fits all relevant IUCN criteria.

TAXONOMIC NOTE

The phenotypic similarity of the Green Wood-Hoopoe to the Violet Wood-Hoopoe prompted an evaluation of the genetic similarity of the two species by Cooper *et al.* (2001). They found that birds do indeed hybridise, as suspected, by observations of mixed flocks (du Plessis *et al.* 2007), because of the close genetic similarity of an apparent hybrid to other Namibian Wood-Hoopoes (0.15%). They also proposed that the genetic distance of 1.0% to 1.2% between the two taxa is too small to separate the two species and they should be synonymised. A reassessment of their methods and of ecological data indicates that their conclusions are premature at best, and Namibian conservation authorities will continue to treat the Violet Wood-Hoopoe as a full species (Simmons *et al.* 2005b), as has been done by others (Davidson 1976, Fry *et al.* 1988, du Plessis 2005). All parties agree that further molecular research is required before firm conclusion can be reached. Sampling of the East African subspecies *P. damarensis granti* would greatly assist this process.