# -Rabbits, Hares and Pikas

## Status Survey and Conservation Action Plan

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# Contents

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**Cover Plate: The volcano rabbit *Romerolagus diazi* (William Oliver, Jersey Wildlife Preservation Trust)**

tion extending from west-central Angola northwards into southern Zaire (Fig. 8.1).

**Habitat and Ecology**

The Bunyoro rabbit is a species of moist savanna found in grasslands and *Isoberlina* woodlands in association with rocky outcrops and, to a lesser degree, with forest (Verheyen and Verschuren 1966, Kingdon 1974). They are frequently found together with the rock hyrax, possibly sharing rock crevices with the latter, and in the western Rift valley occupy habitat similar to that of the rockhares (Kingdon 1974).

Bunyoro rabbits feed nocturnally in groups which consist of pairs, or females accompanied by young (Kingdon 1974). During daylight hours they lie up solitarily in forms made in thick vegetation.

The species is reported to forage on flowers and sprouting grasses and is much attracted to heavily grazed, newly mowed or burnt areas where the grass is short (Kingdon 1974). Leaves of peanut and rice plants are taken in the areas where cultivation fringes suitable habitat (Akaibe pers. comm.).

As with all lagomorphs, this species is probably taken by all opportunistic raptors and carnivores. Major predators would include *Felis serval*, *Genetta tigrina* and G. *servalina*, as well as hawks and owls (Kingdon 1974).

**Reproduction**

Verheyen and Verschuren (1966) and Kingdon (1974) recorded juveniles and pregnant or lactating females in all months, suggesting that breeding occurs throughout the year. Their gestation is thought to be about five weeks (Kingdon 1974). One or two altricial young are born in breeding stops, the entrance of which is concealed with grass and soil (Walker 1964, Kingdon 1974).

**Population Status and Threat**

The species is common and well protected in the Garamba National Park in northeastern Zaire (Verheyen and Verschuren 1966) and is also reasonably abundant in southern Sudan (Kingdon pers. comm.). The status in other areas, particularly Uganda, Chad and Angola are unknown. Akaibe (pers. comm.) reports that the species' savanna habitat is ploughed under to a limited extent to provide for the cultivation of peanuts and rice and that it is also frequently hunted using nets and dogs. Kingdon (1974) also reports that the species habitat is burnt annually, sometimes biennially, removing the grassland habitat and leaving the species more vulnerable. The extent of this threat is unknown.

**Conservation Measures Proposed and Adopted**

As far as we have been able to ascertain, the species is not afforded any form of legislative protection. It is, however, reported to be locally abundant, and occurs in the Garamba National Park and Murchison Falls National Park. Possibly no form of protection may be required.

**Conclusion**

Although data on the distribution of the Bunyoro rabbit are sparse and estimates of population densities unavailable, all indications are that the species is not under threat.

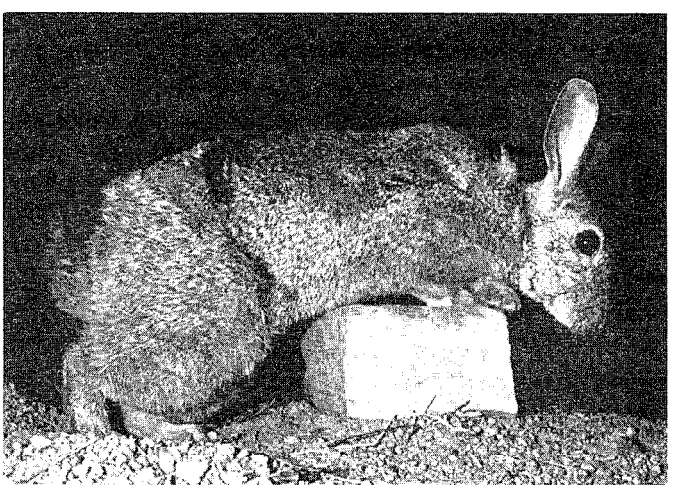
## The Rockhares
## *Pronolagus* Lyon 1904

**Species:** Greater red rockhare *Pronolagus crassicaudatus* (I. Geoffroy 1892), Jameson's red rockhare *Pronolagus randensis* (Jameson 1907), Smith's red rockhare *Pronolagus rupestris* (A. Smith 1834)

Excluding taxonomic and distributional data, little biological information is available for the three species.

**Taxonomy and Description**

The type specimen was originally described as *Lepus crassicaudatus* I. Geoffroy but was corrected to *Pronolagus crassicaudatus* by Lyon (Lyon 1906 in Meester et al. 1986). The rockhares have been subjected to a variety of taxonomic interpretations with one to six species being recognized (Roberts 1951, Peddie 1975). As is currently understood, however, the genus comprises three distinct species: Smith's red rockhare *P. rupestris*, Jameson's red rockhare *P. randensis* and the greater red rockhare *P. crassicaudutus* (Robinson and Dippenaar 1983, Meester et al. 1986 amongst others). Lundholm *(1955)* regards *randensis* as a synonym of *crassicaudutus.* A combination of external features, including the tail which is uniformly reddish brown, brown or dark brown and the short ears (63-109mm) provide a ready means of distinguishing representatives of the genus from other Southern African leporids (Robinson 1982). Distinctive, yet subtle, pelage dif-



**Jameson's red rockhare *Pronolagus randensis***
**(Photo by T. J. Robinson)**

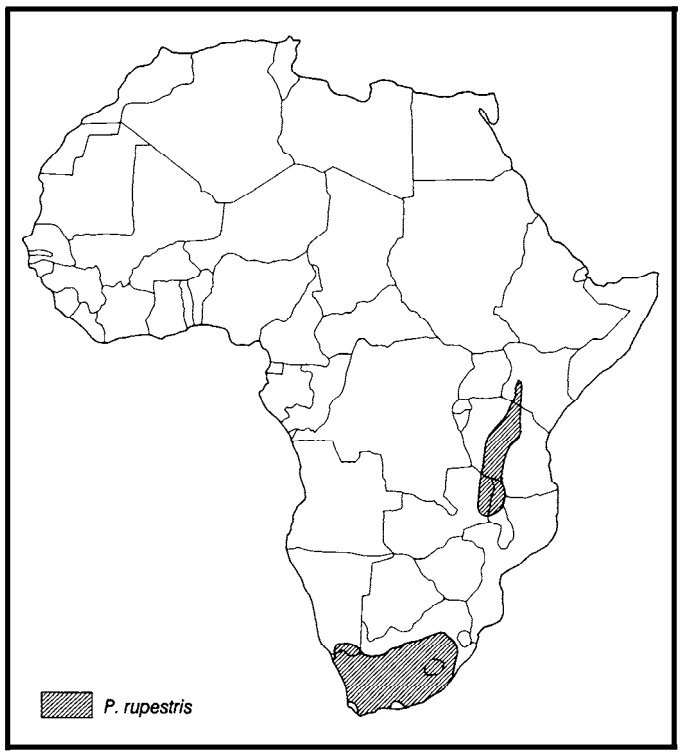



**Figure 8.2** Distribution of Smith's red rockhare *Pronolagus rupestris* in Africa

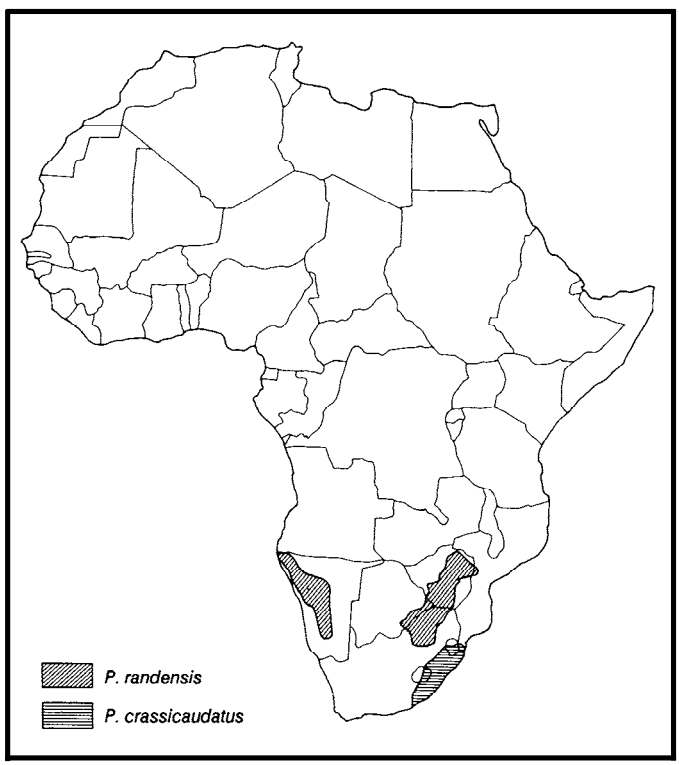



**Figure 8.3** Distribution of the greater red rockhare *Pronolagus crassicaudatus* and Jameson's red rockhare *P. randensis* in Africa

ferences and differences in the shape and size of the crania are useful in distinguishing the three species (Robinson 1982).

The taxonomy of the subspecies remains uncertain. Petter (1972) lists ten subspecies of Smith's red rockhare *P. rupestris*, but Meester et *al.* (1986), following Shortridge (1934), consider *australis* to include *mulleri*, and *whitei* to be a subspecies of *P. randensis.* In summary therefore, the following subspecies are recognized: In southern Africa *P. r. rupestris* (A. Smith, 1934); *P. r. melanurus* (Ruppell, 1842); *P. r. curryi* (Thomas, 1902); *P. r. saundersiae* (Hewitt, 1927); *P. r. australis* Roberts, 1933; *P. r. fitzsimonsi* Roberts, 1938 and *P. r. barretti* Roberts, 1949. Outside southern Africa, two subspecies are accepted: *P. r. nyikae* (Thomas, 1902 - eastern Zambia and northern Malawi) and *P. r. vallicola* Kershaw, 1924 (Rift Valley, Kenya and possibly northern Tanzania).

Following Ellerman et *al.* (1953), Petter (1972) and Meester et *al.* (1986) five subspecies of the greater red rockhare *P. crassicaudatus* are recognized, although neither their status nor the geographic limits are well defined. Smithers (1983) feels that *P.* c. *bowkeri* Hewitt, 1927 may be a subspecies of *P. rupestris* and that the status of *P. c. kariegae* Hewitt, 1927 is uncertain. However, by consensus, the five subspecies are: *P. c. crassicaudatus* (I. Geoffroy, 1832); *P. c. ruddi* Thomas and Schwann, 1905; *P. c. kariegae* Hewitt, 1927; *P.* c. *bowkeri* Hewitt, 1927 and *P. c. lebombo* Roberts, 1936.

Finally, ten subspecies of Jameson's red rockhare *P. randensis* are recognized by Petter (1972) although Meester el al. (1986) have provisionally listed only nine, regarding *fitzsimonsi* as a subspecies of *rupestris*; and *whitei*, which is included in *P. rupestris* by Petter (1972 - see above) is thought to have priority over *ekmani* (Meester et *al.* 1986). Interestingly, Meester *et al.* (1986) speculate that there may in fact only be an eastern *(P. r. randensis)* and western *(P. r. caucinus)* subspecies. Nonetheless, pending further study the nine subspecies provisionally recognized by these authors are: *P. r. randensis* Jameson, 1907; *P. r. powelli* Roberts, 1924; *P. r. makapani* Roberts, 1924; *P. r. capricornis* Roberts, 1926; *P. r. caucinus* Thomas, 1929; *P. r. kobosensis* Roberts, 1938; *P. randensis whitei* Roberts, 1938; *P. r. kaokoensis* Roberts, 1946 and *P. r. waterbergensis* Hoesch and Von Lehmann, 1956.

**Distribution of Smith's red rockhare**

The species is widely distributed in the Southern African subregion, occurring throughout South Africa's Cape Province except for the coastal forests and the extreme northern reaches of the Province. It is found in the Transkei, southern and central Natal, the Orange Free State, southeastern Transvaal and the western fringes of the Namibian escarpment. Importantly, it occurs extralimitally in Malawi, eastern Zambia, central Tanzania and southwestern Kenya (Fig. 8.2; Meester *et al.* 1986).

**Distribution of Greater red rockhare**

The species appears to be endemic to the Southern African subregion and, in particular, the eastern Cape Province, Transkei, Natal, eastern Lesotho, Swaziland, southeastern

Transvaal and southern Mozambique (Fig. 8.3; Meester et *al.* 1986).

**Distribution of Jameson's red rockhare**

The species is characterized by a disjunct distribution and is largely endemic to the Southern African subregion. Meester et *al.* (1986) report that an eastern population extends from the Vaal River near Parys, through the central, northern and western Transvaal, southern, eastern, northeastern and western Zambia, western Mozambique and southeastern Botswana. Similarly, a western population is thought to extend northwards from Rehoboth along the escarpment to southwestern Angola (Fig. 8.3).

**Habitat and Ecology**

All rockhare species are restricted to rocky situations in association with grass or scrub on hill and mountainsides, irrespective of whether these are basalt, granite or sandstone formations (Smithers 1983). In an ecological study on Jameson's red rockhare, Peddie (1975) recorded the species to rarely venture any significant distance from its rocky habitat. The greater red rockhare is reported to occupy suitable habitat from sea level to elevations of 1,550m.

The confinement of rockhares to this characteristic habitat is noteworthy, since distribution is discontinuous and there are extensive tracts of intervening country which is unsuitable. This creates a patchwork distribution of habitat "islands" which may be of considerable importance in determining geographic variation and in the planning of genetic conservation strategies for the respective taxa.

When lying up, rockhares appear to be gregarious although this is probably more as a result of occupying restricted areas of rocky habitat (Rautenbach 1982; Smithers 1983; Peddie 1975). All species forage individually at night but spend daylight resting in rock crevices or in forms. Evidence of the taxon's solitary nature is provided by Peddie (1975) who found only 15% of the nocturnal sightings of Jameson's red rockhare in the Zimbabwean Matopos to be of pairs. Smithers (1983) notes that the female rock rabbit may be accompanied by more than one male during the breeding season.

Rockhares have been reported to be the most vocal of the African lagomorphs. Roberts (1951) describes them as uttering loud startling screams when disturbed at night although this behavior has never been noted by either corresponding author. Other vocalizations include a churring sound in a hand caught juvenile, and an adult disturbed before sunrise "barked" before fleeing (Duthie pers. obs.).

All three rockhare species deposit their characteristics disc-like faeces in middens which may serve a social function (Smithers 1983).

All species are grazers (Smithers 1983). More than 90% of identifiable plant remains in the faeces of a single Smith's red rockhare analyzed by Stewart (1971) were of monocotyledonous origin. Jameson's red rockhare prefers feeding in areas of sprouting grass and avoids areas of dense aerial cover and moribund vegetation (Peddie 1975) an observation which holds for the other taxa as well.

Leopards *Pantherapardus,* Cape eagle *owls Bubo capensis* and black eagles *Aquila verreauxi* are known to take rockhares (Peddie 1975).

**Reproduction**

Available evidence suggests that Jameson's red rockhare breeds throughout the year (Peddie 1975). No comparable data exists for the other two species. Both Jameson's red rockhare and Smith's red rockhare have one or two young per litter (Peddie 1975; Shortridge 1934; Smithers and Wilson 1979; Rautenbach 1982). Altricial Smith's red rockhare young are born in nests constructed of plant debris which are lined with fur (Shortridge 1934; Pepler pers. comm.). Further support for an altricial birth is provided by the study of near-term fetuses which are very sparsely haired (Smithers 1983).

**Population Status and Threat**

The ranges of all three species are well represented in National and Provincial Parks and Wildlife refuges in Southern Africa and none of the species are considered to be in any danger. As stated previously however, the disjunct distribution and probable genetic heterogeneity between populations are important conservation considerations but, with available data, this cannot be addressed. While the northernmost population of Smith's red rockhare is widespread in southwestern Kenya and central Tanzania, it is presumably a relict of a once continuous distribution; its precise relationship to the more southern population needs clarification. Likewise, a similar situation holds for the two geographic populations currently recognized as belonging to Jameson's red rockhare (Fig. 8.3).

**Conservation Measures Proposed and Adopted**

The representative species are locally abundant and well represented in National and Provincial parks in South Africa, as well as in similar facilities in other regions of their respective geographic ranges. The various rockhare species are afforded seasonal protection as game species by Provincial Nature Conservation Agencies.

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