

LEAN & MEAN *Guinea's*

WILD AND DOMESTICATED HELMETED GUINEAFOWL: ORIGINS, BENEFITS, DANGERS, REGULATIONS AND AN 'IDENTIKIT'

Origins

Historically, the Helmeted Guinea-fowl occurred in grassland and savanna habitats throughout Africa. It was found from Morocco (now almost certainly extinct) in the north, Senegal in the west, Somalia in the east and southwards to South Africa.

The name 'guineafowl' stems from the fact that Portuguese explorers transported birds from the Gulf of Guinea in west Africa to Europe in the 15th century for domestication. More than 2 000 years ago, the ancient Greeks and Romans also domesticated guineafowl from North Africa and possibly, present-day Sudan, for meat and egg production. However, the bird subsequently mysteriously disappeared from Europe.

Like many wide-ranging species in Africa, the Helmeted Guinea-fowl has

evolved regional variation in appearance which is expressed in the recognition of nine, well-marked subspecies. These can be distinguished mainly by differences in the size and shape of the helmet, the colour of the face and the shape and colour of the wattles (a pair of cartilaginous structures which hang from the base of the jaw).

Birds from west Africa have tiny helmets (little more than 5-7 mm high), white faces and round, red wattles.

Birds from the north-eastern savannas which extend from the southern margin of the Sahara Desert to the equatorial forests have much longer (6-15 mm) helmets, light blue faces and round, blue wattles. They also have a short (3-5 mm) 'moustache' of cartilaginous tufts around their nostrils.

Birds from Somalia have helmets and faces like their northern savanna cousins, but have triangular-shaped wattle

tips which are blue at the base and red at the tips. Most strikingly, they have moustaches up to nearly 20 mm long.

Birds from southern Africa have long (25-40 mm), sabre-shaped helmets, blue faces and pennant-shaped wattles with blue bases and red tips.

The Helmeted Guinea-fowl has undergone a massive range expansion within South Africa over the last 150 years. When European settlers arrived in the 1600s, it probably did not occur south of the Orange River or west of



tion (e.g. that associated with urbanization, commercial forestry, etc.) have reduced prime guineafowl habitat considerably, thus causing reductions in the size of local populations and increases in their isolation from one another. In particular, extensive plantings of maize and wheat, and the effective removal of weeds have deprived guineafowl of essential cover and food, making them vulnerable to local extinctions caused by poaching, disease, predation, etc.

Benefits

Over the last several centuries, guineafowl from west Africa have been bred selectively in captivity for meat production into a domesticated form which grows rapidly to a weight 30-50% greater than adult wild guineafowl from west Africa. Meat from these birds is highly sought after by up-market restaurants throughout Europe and North America.

Domesticated guineafowl can be distinguished from their wild cousins in southern Africa by their white faces and red wattles. Also, unlike any form of wild guineafowl, they often have white feathers on their wings and bodies, yellow (not dark brown) legs and white (not blackish) claws (see the Identikit below).

Dangers

Since domesticated guineafowl can be purchased readily from a range of suppliers and breed well in captivity, some landowners have released such birds into the wild either to supplement or resuscitate collapsing or locally extinct populations of wild birds. These domesticated guineafowl are often known as 'lavenders', 'frenchies', 'royal purples' and 'Rhodesian walkers'.

The tragedy of such 'restoration' conservation measures is that these introductions almost invariably fail for a range of reasons, all relating to the

or fat 'Frenchies'?

BY CHARLES RATCLIFFE & PROF. TIM CROWE, PERCY FITZPATRICK INSTITUTE, UNIVERSITY OF CAPE TOWN, RONDEBOSCH.

process of domestication.

Domesticated guineafowl have shortened guts which can easily cope with chicken feed, but not with the underground bulbs and tubers on which wild guineafowl depend for much of the autumn and winter. Of course, this assumes domesticated guineafowl can find this 'unsuitable' subterranean food to begin with.

Another more serious problem relates to the ability of even captive-reared wild gamebirds to survive all the potential agents of extinction which created the need for introductions in the first place. In particular, predators (including poachers) find them easy prey, and the few birds that make it through to the shooting season provide wingshooters with poor sport.

Worse still, if any of these third-rate guineafowl make it through to the next breeding season, domesticated guineafowl hens are notoriously poor breeders. They generally either drop their eggs helter-skelter in the veld or dump them in the nests of other hens.

One of us (TC) has a found nest with more than 40 eggs, none of which hatched successfully. The few domesti-

cated hens that actually make it through a complete incubation tend to abandon or care poorly for their downy young, which die from exposure or starvation.

Finally, introduced domesticated guineafowl are genetic 'timebombs' because they interbreed readily with wild birds. Even if a landowner successfully removes what appear to be all the domesticated birds from his/her property, there is a real danger that deficient genes (e.g. for inferior breeding behaviour) from domesticated birds may still linger on in the natural population. Some preliminary research done in our Molecular Genetics Laboratory has identified DNA from domesticated guineafowl in what appeared to be perfectly normal, wild birds.

Regulations

(Modified from: D.N. Johnson (1991) Natal ParksBoard)

Because all domestic and wild Helmeted Guinea-fowl are still the same *Numida meleagris* species, they are technically classed as game in the Natal Nature Conservation Ordinance. In

terms of the ordinance, permits are required to:

- Keep guineafowl in captivity;
- hunt guineafowl;
- sell, dispose of or purchase guineafowl and eggs;
- export and import, or transport live guineafowl and eggs;
- remove eggs or live birds from the wild; and
- introduce guineafowl or eggs into any area.

The purpose of these laws is to prevent our wild guineafowl stocks being unnecessarily depleted and genetically contaminated.

Of relevance to the entrepreneur is that very few attempts in South Africa to rear table birds for the catering trade (including one by a major company) have been profitable. **Δ**

Authors: Charles Ratcliffe, Percy FitzPatrick Institute, University of Cape Town, Box 165, Nottingham Road 3280. Tel: 0836276157 and Prof. Tim Crowe, Percy FitzPatrick Institute, University of CapeTown, Rondebosch 7701. Tel: 021-6503292, Fax: 021-65032 E-mail: tmcrowe@botzoo.uct.ac.za

The Identikit

Feature	Domestic Birds	Wild Birds
Wattles	Rounded and red	Pennant shaped, blue with red tips
Helmet Shape	Short, triangular	Long, sabre-shaped, hooked backwards
Face	Whitish	Pale blue
Collar Feathers	Purple/Blue/Grey	Barred and spotted
Body/wing Feathers	Some may be white	Black with white spots
Leg Colour	Orange yellow	Dark brown or black
Claw Colour	Some or all white	Dark brown or black

