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The African civet cat (*Viverra civetta*) and Its Life Supporting Role in the Livelihood of Smallholder Farmers in Ethiopia

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Abstract

Ethiopia is the world's main supplier of civet musk with international export share of 90 percent and it has a long-lasting history of civet musk trading to perfume industry. Civet musk is collected from civet cats which are classified among mammalian species. Their habitat is mainly Ethiopia, Guinea, the Senegal, and other places in equatorial Africa and rarely found in arid regions. Even though, African viverrids tend to be carnivorous; they show a feeding habit of omnivores. They are nocturnal. They have been kept in captivity for hundreds of years in Ethiopia and most civet farmers keep 10-15 civets in individual cages. Polyestrous African civets has age at sexual maturity of about 1 year and has average life span of 15-20 years. More commonly, litter size is 2 or 3 a year with 1 to 4 kits per litter. Despite its importance in the livelihoods of smallholder producers, mistreatment of civets in captivity has raised a welfare question. Moreover, increasing tendencies of the perfumeries towards the use of synthetic fixatives, poor husbandry practice and the decline in wild population has threatened prospects of the civet industry in Ethiopia. However, opportunities also exist as musk is among rare commodities, the synthetic is not perfectly replacing the natural musk and the existing musk production only covers 22 percent of the demand. It was also identified among potential investment opportunities in Ethiopia. Hence this literature review forwarded some possible recommendations to improve the husbandry practice and tradability of civet musk by integrating development and research works using the traditional knowledge as core player.

Key words: African civet, captivity, Ethiopia, musk production and trading, opportunities and threats, welfare problem

1. Introduction

The African civet cat (*Viverra civetta*) is native to Ethiopia, Guinea, the Senegal, and other places in equatorial Africa (Dannenfeldt, 1985). Civet cat farming is an ancient practice in Ethiopia and the Queen of Sheba allegedly presented civet musk to King Solomon as gift and even today civet musk is an important export commodity (Abebe, 2003). Civet cats are naturally wild in Ethiopia (Dannenfeldt, 1985); however, it was estimated that more than 200 farms with about 4000 civets in captivity found in Ethiopia (FAO, 2000). Most of these farms found in the low-lying areas of west Ethiopia whereas few of them found in south Ethiopia (FAO, 2000; Kumera, 2005). Moreover, informal discussion with individuals from civet producing areas of southwest Ethiopia in 2007 indicated that some farmers capture civets from the forest and release them back to the wild after collecting musk. Ethiopia is the world's main supplier of musk for the perfume

industry (Dannenfeldt, 1985) and it has 90 percent share in the export of civet (Jemal, 1999). Civet cat rearing is a fairly profitable business and serves as means of livelihood for farmers (Kumera, 2005; Tolosa and Regassa 2007) and is economically important activity (Kingdon, 1977). Hence, this literature review was initiated to gather scanty information on prospect and retrospect of captive civet cats farming.

2. The civet cat

Civets are grouped under order *Carnivora* and family *Viverridae* and their status was categorized under not threatened (FAO, 2000). The civet cat is the one of the four vertebrate mammals producing an aromatic medicinal product (Dannenfeldt, 1985). Civet cats are wild viverrids of the tropics (Smithers, 1983); they are nocturnal and solitary animals that mixed only during mating (Kingdon, 1977). The African civet has a habit of following regular paths and uses dung middens, civetries (civet latrines), and musk to mark its territory and announce its presence both in mates and adversaries (Abebe, 2003).

2. 1. Feeding habit

Even though, civet cats are primarily carnivorous (Dannenfeldt, 1985) they are opportunistic omnivorous (Tolosa and Regassa 2007) and in captivity they fed on a mixture of fruit and vegetables, maize meal and meat (1kg/civet) or four eggs, every five days (FAO, 2000), and they also fed on insects, rodents, invertebrates and birds (Abebe, 2003; Tolosa and Regassa 2007).

2.2. Husbandry and management

2.2.1. Captivity

The African civet has been kept in captivity in Ethiopia for hundreds of years for musk production (FAO, 2000). Civets are trapped in the wild using a noose with a bell attached. The trappers charge between 120 and 150 ETB (Ethiopian Birr) for a civet, payable after two months to ensure survival, unfortunately, captive civets often die of a disease resembling canine parvovirus infection (FAO, 2000).

2.2.2. Housing

Most civet farmers keep 10-15 civets for years in individual cages (FAO, 2000). Their cages are so small that they are unable to even turn around which causes severe welfare problems (WSPA, 1999). The cages are placed in rows on trestles in dark rooms of airless smoke-filled huts (WSPA 1999; FAO, 2000). Smoke is used to get rid of fly worry (FAO, 2000). For this purpose fire is left smoldering to maintain high temperature, which farmers believe increase the amount of musk production. No bedding is provided, and hypothermia is a common cause of death (WSPA 1999). Hygiene is usually very poor and urine and feces are left to decay on the floor (FAO, 2000).

2.2.3. Reproduction

Age at sexual maturity ranges from $\frac{3}{4}$ to 1 year and gestation length was 65 to 75 days with a maximum of 4 kits per litter (Kumera, 2005), whereas Tolosa and Regassa, (2007) reported kit size of 3 to 5 per litter. Females are polyestrous and are able to have 2 or 3 litters a year. The average lifespan of the African civet is 15 to 20 years. Females are polyestrous and are able to have two or three litters a year (Shalu, 2000).

2.2.4. Collection and trading of musk

Civet musk is a foul smelling scent produced by the anal glands of the male civet cat (FAO, 2000), this is because males produce larger quantity and better quality musk than females (Tolosa and Regassa, 2007). Musk is collected using a spoon made from cow horn every 11-12 days during the rainy season and 9-10 days during dry season, therefore, a civet will yield about 300-400g musk a year (FAO, 2000). Ethiopia has a worldwide monopoly for civet musk production and annually exports about 2,000kg of musk worth about US\$ 900,000 (FAO, 2000). This civet is exported to Europe and the United States for perfumery (Dannenfeldt, 1985). A new market has also opened to Far East countries such as China, Japan and Korea (Kumera, 2005). Exporters receive around \$400 for each kilogram of civet musk, with farmers receiving about half that amount (WSPA, 1999). Civet musk also traditionally used as medicine to treat various ailments (Jemal, 1999).

3. Opportunities and threats

The existing export of musk only covers 22 percent of the international demand (Kumera, 2005) and civet cat farming is identified among potential investment opportunities in Ethiopia, for example it was noted that one established farm in Ethiopia has claimed for having 400 civets (Clive, 2007); even though, 50 percent of the farmers giving up musk production due to demand and price fluctuations (Tolosa and Regassa, 2007). The use of civetone (refined compound of civet musk) is more preferable by high quality perfume industries (Anonis 1997; Kumera, 2005) even though some perfume manufacturers now use only synthetic musk (Clive, 2007). Musk production was secondary source of income for the farmers to crop production and even for few of them it is the primary source of income, however, it is a labor-intensive practice and there is a considerable mistreatment and welfare problem in captive civets' management (Tolosa and Regassa, 2007). These among others include inadequate nutrition, poor housing and handling, parasitic load, insufficient restraint and musk extraction facilities (Tolosa and Regassa, 2007) and as a result even they can be killed for their musk (Clive, 2007). Moreover, civets are kept in deplorable conditions and the frequent musk extraction is a traumatic experience for them (Clive, 2007). Moreover, deforestation has resulted in the decline of the wild population.

4. Conclusion

To minimize the welfare problem in civet farming extensive studies should have to be carried out both on wild civets and civets under captivity to gather information on geographic distribution, constraints and opportunities of civet farming, status, trend and phenotypic characters. To achieve this, however, validation and embracement of the long-lasting traditional practices in the development and research process is inevitable. Developing ways for improved management therefore may lead into domestication and improvement of the wellbeing of mistreated captive civets.

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