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INTEGRATIVE TAXONOMY AND PHYLOGENETIC SYSTEMATICS OF THE GENETS (CARNIVORA, VIVERRIDAE, *GENETTA*): A NEW CLASSIFICATION OF THE MOST SPECIOSE CARNIVORAN GENUS IN AFRICA

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Abstract: The taxonomy of the genus *Genetta* has been hotly debated. Following recent clarifications on the phylogeny of and species boundaries within the genets, we propose a new classification, including discriminant morphological diagnoses, which provides for the first time a synthetic description of the re-assessed species diversity within the genus (17 species). Prospects concerning further investigations on the systematics of the genets are discussed.

Key words: Carnivora; Viverridae; *Genetta;* phylogenetic systematics; integrative taxonomy; classification; diagnosis; discrete characters; distribution; habitat; Africa

1. INTRODUCTION

Members of the genus *Genetta* G. Cuvier, 1816 are small African carnivorans (Viverridae, Viverrinae) that diversified into a wide range of habitats (Kingdon, 1997; Gaubert, 2003a). The genets constitute by far the most speciose carnivoran genus in Africa, but their systematics has been hotly debated, especially within the large-spotted genet complex (Gray,

1864; Matschie, 1902; Allen, 1939; Roberts, 1951; Wenzel and Haltenorth, 1972; Rosevear, 1974; Coetzee, 1977; Crawford-Cabral, 1981; Schlawe, 1981; Crawford-Cabral and Pacheco, 1992; Wozencraft, 1993; Kingdon, 1997; Crawford-Cabral and Fernandes, 2001).

Recent advances in the systematics of the genus *Genetta* have been made possible by the use of an integrative approach (i.e. combination of independent data sets). A molecular phylogenetic analysis (cytochrome *b*) allowed the redefinition of the boundaries of the genus, now including the aquatic genet (formerly *Osbornictis piscivora*; Gaubert et al., 2004a). A taxonomic revision of the large-spotted genet complex based on discrete morphological characters led to the characterization of three morphospecies: *G. poensis* Waterhouse, 1838, *G. "schoutedeni"* (Crawford-Cabral, 1970) and the new species *G. bourloni* Gaubert, 2003 (Gaubert, 2003b). In addition, a neotype was designated for the rusty-spotted genet *G. maculata* (Gray, 1830) (= *G. "rubiginosa" sensu* Crawford-Cabral and Pacheco, 1992) in order to stabilize the classification within the large-spotted genet complex (Gaubert et al., 2003a,b; but see Grubb (2004) for a different alternative). Species boundaries were further tested in a phylogenetic framework (cytochrome *b* and morphology). The results contradicted traditional taxonomy, the servaline and small-spotted genets not being monophyletic (Gaubert et al., 2004b). Branching patterns and genetic distances confirmed the species status of *G. cristata* and the three forest "forms" belonging to the large-spotted genet complex (*G. bourloni, G. poensis* and *G. "schoutedeni"*) and showed that the traditional subgenera *Paragenetta*, *Pseudogenetta* and *Genetta* had no phylogenetic value. In addition, a phylogeographic analysis using a combination of morphological and molecular approaches suggested the presence of a distinct species within *G. maculata,* namely a southeastern African population that we tentatively named *G. "letabae"* (Gaubert et al., in press a; in agreement with Crawford-Cabral & Fernandes, 2001). This last result was confirmed by the study of chromosomal morphology (Gaubert et al., in press b).

The aim of this paper is to establish the morphological diagnoses of the genets, together with geographic ranges and habitats, in order to provide for the first time a synthetic description of the re-assessed species diversity within the genus *Genetta* (17 species).

2. MATERIALS AND METHODS

In order to have an exhaustive representation of the morphological variability within genets, one of us (PG) defined diagnostic, discrete morphological characters from more than 5500 specimens of Viverrinae housed in 13 major museums worldwide (see Acknowledgments).

Information concerning distribution ranges (given by country) and habitats were taken directly from museum specimen labels and bibliographical sources when available. The locality names were checked using geographical atlas (*Atlas mondial Encarta,* 1998), gazetteers (*Gazetteer of collecting localities of African rodents*: Davis and Misonne, 1964; *Official Standard Names Gazetteer*, United States Board on Geographic Names; *Alexandria Digital Library Gazetteer Server*: http://fat-albert.alexandria.ucsb.edu:8827/gazetteer) and curators' resources. In order to maximize the discriminative power of the diagnoses, we focused on providing combinations of diagnostic characters allowing the distinction between sympatric species.

3. RESULTS

New classification of the genus *Genetta*, with distribution, habitat and discriminative diagnosis for each species.

Genus *Genetta* G. Cuvier, 1816

***Genetta abyssinica* (Rüppel, 1836)** [Abyssinian genet]
Synonyms: none.
Distribution: Djibouti (A. Laurent, Toulouse, pers. comm. 2001), Erytrea, Ethiopia, Somalia, Sudan.
Habitat: from high Ethiopian plateaux (montane moorland and grassland) to steppe and sub-desert areas on plains (Yalden et al., 1996; Diaz Behrens and Van Rompaey, 2002).
Sympatric species: *G. genetta, G. maculata.*
Identification: [body and coat] dark, continuous mid-dorsal line longitudinally crossed by a brighter (ground coloration) line – hair short, no dorsal crest – dorsal spots fused into several longitudinal stripes – feet bright (same as ground coloration) – central depression of forefeet hairless – alternation of dark and bright rings to end of tail – tip of tail dark; [skull] absence of premaxillary-frontal contact – caudal entotympanic bone not ventrally inflated – curve line of anterior part of caudal entotympanic bone (external side) continuous – maxillary-palatine suture anterior to main cusp of P^3.

***Genetta angolensis* Bocage, 1882** [miombo genet]
Synonyms: *hintoni* Schwarz, 1929; the type specimen of *mossambica* Matschie, 1902, is considered a hybrid between *G. maculata* and *G. angolensis* (Gaubert et al., in press a).

Distribution: Angola, Botswana, Democratic Republic of Congo, Malawi, Mozambique, Tanzania, Zambia, Zimbabwe.
Habitat: open miombo (*Brachystegia*) woodlands interspersed with savannah (Crawford-Cabral, in press), savannah-forest mosaic.
Sympatric species: *G. genetta, G. "letabae", G. maculata, G. "schoutedeni"*.
Identification: [body and coat] full dark, continuous mid-dorsal line – hair long, presence of a dorsal crest – scapular region poorly spotted – posterior parts of feet dark, with hindfeet almost completely dark – width of bright rings relative to dark rings (middle of tail) = 50 to 75% – last bright ring of tail covered with dark – tip of tail dark – two pairs of nipples; [skull] *int1* = 1.00 ± 0.12 cm (*int1* = ratio between interorbital constriction and frontal width; see Gaubert et al., 2004b and in press a) – caudal entotympanic bone not ventrally inflated – curve line of anterior part of caudal entotympanic bone (external side) continuous.

***Genetta bourloni* Gaubert, 2003** [Bourlon's genet]
Synonyms: none.
Distribution: Ghana, Guinea, Ivory Coast, Liberia, Sierra Leone.
Habitat: rain forest.
Sympatric species: *G. johnstoni, G. pardina, G. poensis.*
Identification: [body and coat] full dark, continuous mid-dorsal line – dorsal spots partly fused at rump – feet dark – almost half of tail dark – tip of tail dark; [skull] *int1* = 1.00 ± 0.12 cm – posterior extension of frontal bones very large, almost completely overlapping dorsal region of interorbital constriction – curve line of anterior part of caudal entotympanic bone (external side) broken.

***Genetta cristata* (Hayman, 1940)** [crested servaline genet]
Synonyms: *bini* Rosevear, 1974.
Distribution: Cameroon, Nigeria; Gabon and Congo as potential zones of sympatry/intergradation with *G. servalina*.
Habitat: rain forest.
Sympatric species: *G. maculata, G. "schoutedeni"* (*G. servalina*: uncertain).
Identification: [body and coat] full dark, discontinuous mid-dorsal line – mid-dorsal line with hairs relatively long, giving a continuous aspect to the line – presence of a nuchal crest – feet dark – width of bright rings relative to dark rings (middle of tail) = 50 to 75% – alternation of dark and bright rings to end of tail – tip of tail bright; [skull] premaxillary-frontal contact present – *int1* = 1.00 ± 0.12 cm – caudal entotympanic bone ventrally inflated – curve line of anterior part of caudal entotympanic bone (external side) continuous.

***Genetta felina* (Thunberg, 1811)** [South African small-spotted genet]
Synonyms: *macrura* Jentink, 1892.
Distribution: Angola, Namibia, Orange Free State, South Africa, Zambia.
Habitat: woodland savannah, grassland, thickets, dry vlei areas, bordering of deserts.
Sympatric species: *G. genetta, G. "letabae", G. maculata, G. tigrina*.
Identification: [body and coat] full dark, continuous mid-dorsal line, always black – ground color whitish grey (brighter than in *G. genetta*) – hair long, presence of a dorsal crest – posterior parts of feet dark, with hind feet almost completely dark – confused annulation pattern at beginning of tail (contrary to *G. genetta*) – alternation of dark and bright rings to end of tail – width of bright rings relative to dark rings (middle of tail) = 200% – tip of tail bright (larger than in *G. genetta*); [skull] posterior extension of frontal bones moderated, overlapping ca. 50% of dorsal region of interorbital constriction – *int1* = 1.00 ± 0.12 cm – curve line of anterior part of caudal entotympanic bone (external side) broken.

***Genetta genetta* (Linnaeus, 1758)** [common small-spotted genet]
Synonyms: *afra* G. Cuvier, 1825; *albipes* Trouessart, 1904; *balearica* Thomas, 1902; *barbar* Wagner, 1841; *barbara* C. E. H. Smith, 1842; *bella* Matschie, 1902; *bonapartei* Loche, 1857; *communis* Burnett, 1830; *dongolana* Hemprich and Ehrenberg, 1832; *gallica* Oken, 1816; *grantii* Thomas, 1902; *guardafuensis* Neumann, 1902; *hararensis* Neumann, 1902; *hispanica* Oken, 1816; *isabelae* Delibes, 1977; *leptura* Reichenbach, 1836; *ludia* Thomas and Schwann, 1906; *lusitanica* Seabra, 1924; *melas* Graells, 1897; *neumanni* Matschie, 1902; *peninsulae* Cabrera, 1905; *pulchra* Matschie, 1902; *pyrenaica* Bourdelle and Dezillière, 1951; *rhodanica* Matschie, 1902; *senegalensis* J. B. Fischer, 1829; *tedescoi* de Beaux, 1924; *terraesanctae* Neumann, 1902; *vulgaris* Lesson, 1827.
Distribution: Algeria, Angola, Benin, Botswana, Burkina Faso, Chad, Djibouti (Künzel et al., 2000), Egypt, Eritrea, Ethiopia, Ghana, Ivory Coast, Kenya, Mali, Mauritania, Morocco, Mozambique, Namibia, Niger, Nigeria, Oman, Republic of Yemen, Saudi Arabia, Senegal, Somalia, South Africa, Sudan, Tanzania, Togo, Tunisia, Uganda, Zambia, Zimbabwe. Populations in France, Portugal and Spain resulting from introductions during historical times (Morales, 1994; Amigues, 1999). Individuals episodically found in Belgium, Germany, Holland, Italy and Libya.
Habitat: all habitats except densely forested areas (in Africa).
Sympatric species: *G. abyssinica, G. angolensis, G. felina, G. "letabae", G. maculata, G. pardina, G. "schoutedeni", G. thierryi.*
Identification: [body and coat] full dark, continuous mid-dorsal line, always black – hair long, presence of a dorsal crest – posterior parts of feet dark

– central depression of forefeet hairy – alternation of dark and bright rings to end of tail - width of bright rings relative to dark rings (middle of tail) = 100% – tip of tail bright; [skull] premaxillary-frontal contact absent – posterior extension of frontal bones moderated, overlapping ca. 50% of dorsal region of interorbital constriction – *int1* = 1.00 ± 0.12 cm – caudal entotympanic bone not ventrally inflated – curve line of anterior part of caudal entotympanic bone (external side) continuous – maxillary-palatine suture at same level than main cusp of P^3.

***Genetta johnstoni* Pocock, 1908** [Johnston's genet]
Synonyms: *lehmanni* Kuhn, 1960.
Distribution: Ghana, Guinea, Ivory Coast, Liberia.
Habitat: moist, mixed woodlands and savannah, rain forest (Gaubert et al., 2002).
Sympatric species: *G. bourloni, G. pardina, G. poensis.*
Identification: [body and coat] pattern of nuchal stripes confused – full dark, continuous mid-dorsal line – dorsal spots partly fused at rump – feet dark – alternation of dark and bright rings to end of tail – width of bright rings relative to dark rings (middle of tail) < 20% – tip of tail bright – one pair of nipples; [skull] flattened skull and mandible – *int1* = 1.00 ± 0.12 cm – posterior extension of frontal bones very large, almost completely overlapping dorsal region of interorbital constriction – curve line of anterior part of caudal entotympanic bone (external side) continuous – weak dentition (possibly adapted to piscivory).

***Genetta letabae* Thomas and Schwann, 1906** [provisional species name]
Synonyms: *zuluensis* Roberts, 1924.
Distribution: Lesotho, Mozambique, Namibia, South Africa, Swaziland.
Habitat: woodland savannah, savannah-forest mosaic.
Sympatric species: *G. genetta, G. "schoutedeni", G. tigrina* (*G. angolensis*: uncertain).
Identification: [body and coat] same as *G. maculata*; [skull] same as *G. maculata*, excepted: wider interorbital constriction relative to frontal width (characterized through morphometric geometric analysis; Gaubert et al., in press a).

***Genetta maculata* (Gray, 1830)** [rusty-spotted genet]
Synonyms: *aequatorialis* Heuglin, 1866; *albiventris* Roberts, 1932; *deorum* Funaioli and Simonetta, 1960; *erlangeri* Matschie, 1902; *fieldiana* Du Chaillu, 1860; *gleimi* Matschie, 1902; *insularis* Cabrera, 1921; *matschiei* Neumann, 1902; *pumila* Hollister, 1916; *schraderi* Matschie, 1902; *soror* Schwarz, 1929; *stuhlmanni* Matschie, 1902; *zambesiana* Matschie, 1902.
Distribution: Angola, Benin, Botswana, Burundi, Cameroon, Central African Republic, Chad, Congo, Democratic Republic of Congo, Equatorial

Guinea (Basilio, 1962), Eritrea, Ethiopia, Gabon, Ghana, Kenya, Malawi, Mozambique, Namibia, Nigeria, Rwanda, Somalia, South Africa, Sudan, Swaziland, Tanzania, Togo, Uganda, Zambia.

Habitat: rain forest, woodland savannah, savannah-forest mosaic, montane forest.

Sympatric species: *G. abyssinica, G. angolensis, G. cristata, G. genetta, G. poensis, G. "schoutedeni", G. servalina, G. thierryi, G. victoriae.*

Identification: [body and coat] full dark, continuous mid-dorsal line, of same color as dorsal spots – hair short, no dorsal crest – dorsal spots usually not fused at rump – feet bright (same as ground coloration) – central depression of forefeet hairy – last bright ring of tail covered with dark – width of bright rings relative to dark rings (middle of tail) = 50 to 75% – tip of tail dark – two pairs of nipples; [skull] *int1* < 1.00 – 0.07 cm – posterior extension of frontal bones very narrow – caudal entotympanic bone not ventrally inflated – curve line of anterior part of caudal entotympanic bone (external side) broken – maxillary-palatine suture at same level than main cusp of P^3.

***Genetta pardina* I. Geoffroy Saint-Hilaire, 1832** [pardine genet]

Synonyms: *amer* Gray, 1843; *dubia* Matschie, 1902; *pantherina* Hamilton-Smith, 1842. The series of specimens representing *genettoides* Temminck, 1853, are considered hybrids between *G. pardina* and *G. maculata* (Gaubert, 2003b).

Distribution: Gambia, Ghana, Guinea, Guinea Bissau (Crawford-Cabral, 1973), Ivory Coast, Liberia, Senegal, Sierra Leone.

Habitat: rain forest, woodland savannah, savannah-forest mosaic, dry savannah.

Sympatric species: *G. bourloni, G. genetta, G. johnstoni, G. poensis, G. thierryi.*

Identification: [body and coat] full dark, continuous mid-dorsal line – hair short, no dorsal crest – dorsal spots usually not fused at rump – feet dark – central depression of forefeet hairy – last bright ring of tail covered with dark – width of bright rings relative to dark rings (middle of the tail) < 20% – tip of tail dark – two pairs of nipples; [skull] premaxillary-frontal contact absent – *int1* < 1.00 – 0.12 cm – posterior extension of frontal bones moderated, overlapping ca. 50% of dorsal region of interorbital constriction – caudal entotympanic bone ventrally inflated – curve line of anterior part of caudal entotympanic bone (external side) broken – maxillary-palatine suture at same level than main cusp of P^3.

***Genetta piscivora* (Allen, 1919)** [aquatic genet]

Synonyms: none.

Distribution: Democratic Republic of Congo.

Habitat: rain forest.

Sympatric species: *G. maculata, G. "schoutedeni", G. servalina, G. victoriae.*

Identification: [body and coat] uniformly rufous brown coat pattern – uniformly dark tail – plantar pads hairless; [skull] premaxillary-frontal contact absent – dorsal region of frontal bone concave – *int1* < 1.00 – 0.12 cm – posterior extension of frontal bones very narrow – caudal entotympanic bone ventrally inflated – curve line of anterior part of caudal entotympanic bone (external side) continuous – premaxillary-maxillary suture at same level than P^1 – maxillary-palatine suture at same level than main cusp of P^3 – M_2 reduced – trenchant dentition (adapted to piscivory).

***Genetta poensis* Waterhouse, 1838** [king genet]

Synonyms: none.

Distribution: Congo, Equatorial Guinea (Bioko Island), Ghana, Liberia.

Habitat: rain forest.

Sympatric species: *G. bourloni, G. johnstoni, G. maculata, G. pardina, G. "schoutedeni", G. servalina.*

Identification: [body and coat] full dark, continuous mid-dorsal line – dorsal spots greatly fused in various regions of body – feet dark – almost half of tail dark; [skull] premaxillary-frontal contact present – *int1* < 1.00 – 0.12 cm – posterior extension of frontal bones very narrow – curve line of anterior part of caudal entotympanic bone (external side) broken.

***Genetta schoutedeni* (Crawford-Cabral, 1970)** [Schouteden's genet] [provisional species name]

Synonyms: [provisionally] *suahelica* Matschie, 1902.

Distribution: Angola, Burundi, Cameroon, Central African Republic, Congo, Democratic Republic of Congo, Ethiopia, Ghana, Kenya, Mozambique, Nigeria, Rwanda, Sudan, Tanzania, Togo, Uganda.

Habitat: rain forest, woodland savannah, savannah-forest mosaic, montane forest.

Sympatric species: *G. abyssinica, G. angolensis, G. genetta, G. "letabae", G. maculata, G. poensis, G. servalina, G. victoriae.*

Identification (provisional): [body and coat] same as *G. maculata*; [skull] similar to *G. maculata,* excepted: *int1* < 1.00 – 0.12 cm (mean value = 0.62 ± 0.16; inferior to *G. maculata*) – caudal entotympanic bone extremely inflated (Gaubert, 2003b).

***Genetta servalina* Pucheran, 1855** [servaline genet]

Synonyms: *aubryana* Pucheran, 1855; *archeri* Van Rompaey and Colyn, 1998; *bettoni* Thomas, 1902; *intensa* Lönnberg, 1917; *lowei* Kingdon, 1977; *schwarzi* Crawford-Cabral, 1970.

Distribution: Cameroon, Central African Republic, Congo, Democratic Republic of Congo, Equatorial Guinea, Gabon, Kenya, Tanzania, Uganda.
Habitat: rain forest, woodland savannah, savannah-forest mosaic, montane forest.
Sympatric species: *G. maculata, G. piscivora, G. poensis, G. "schoutedeni", G. victoriae* (*G. cristata*: uncertain).
Identification: [body and coat] full dark, discontinuous mid-dorsal line – hair short, no dorsal crest – feet dark – width of bright rings relative to dark rings (middle of tail) < 20 % – alternation of dark and bright rings to end of tail – tip of tail bright – one pair of nipples; [skull] premaxillary-frontal contact present – *int1* > 1.00 + 0.12 cm – caudal entotympanic bone ventrally inflated – curve line of anterior part of caudal entotympanic bone (external side) continuous.

***Genetta thierryi* Matschie, 1902** [Hausa genet]
Synonyms: *rubiginosa* Pucheran, 1855; *villiersi* Dekeyser, 1949.
Distribution: Benin, Burkina Faso, Cameroon, Gambia, Ghana, Guinea Bissau (Crawford-Cabral, 1973), Ivory Coast, Mali, Nigeria, Niger, Sierra Leone, Senegal, Togo.
Habitat: brush-grass savannah, Guinean savannah, moist woodlands.
Sympatric species: *G. genetta, G. maculata, G. pardina.*
Identification: [body and coat] brown-rufous, continuous mid-dorsal line, often longitudinally crossed by a brighter (ground coloration) line – hair short, no dorsal crest – feet bright (same as ground coloration) – central depression of forefeet hairless – width of bright rings relative to dark rings (middle of tail) = 100% – last bright ring of tail covered with dark – tip of tail dark – one pair of nipples; [skull] absence of premaxillary-frontal contact – *int1* = 1.00 ± 0.12 cm – caudal entotympanic bone ventrally inflated – curve line of the anterior part of the caudal entotympanic bone (external side) continuous – maxillary-palatine suture anterior to main cusp of P^3.

***Genetta tigrina* (Schreber, 1776)** [Cape genet]
Synonyms: *methi* Roberts, 1948.
Distribution: South Africa.
Habitat: fynbos, grassland, coastal forest.
Sympatric species: *G. felina, G. "letabae"* (narrow hybrid zone in KwaZulu-Natal; Gaubert et al., in press a).
Identification: [body and coat] full dark, continuous mid-dorsal line, always black – hair of intermediate length between *G. maculata* and *G. genetta*, marking a short dorsal crest – posterior parts of feet dark, with hind feet almost completely dark – width of bright rings relative to dark rings (middle of tail) = 50 to 75% – last bright ring of tail covered with dark –

tip of tail dark; [skull] posterior extension of frontal bones moderated, overlapping ca. 50 % of dorsal region of interorbital constriction – *int1* ≥ 1.00 ± 0.05 cm – curve line of anterior part of caudal entotympanic bone (external side) continuous – maxillary-palatine suture anterior to main cusp of P^3.

***Genetta victoriae* Thomas, 1901** [giant genet]

Synonyms: none.

Distribution: Democratic Republic of Congo, Uganda (Kingdon, 1977). The specimen from Cameroon illustrated in Depierre and Vivien (1992) is likely to correspond to *G. cristata*.

Habitat: savannah-forest mosaic, rain forest.

Sympatric species: *G. maculata, G. piscivora, G. "schoutedeni", G. servalina.*

Identification: [body and coat] largest size (head + body reaching 60 cm) - full dark, discontinuous mid-dorsal line – mid-dorsal line with hair relatively long, giving a continuous aspect to the line – presence of a nuchal crest – presence of a pair of wide nuchal stripes – small dorsal spots confusedly distributed – feet dark – tail short (ratio head + body / tail lengthes = 1.3 to 1.4) – width of bright rings relative to dark rings (middle of tail) < 20% – alternation of dark and bright rings to end of tail – tip of tail dark – one pair of nipples; [skull] premaxillary-frontal contact present – *int1* < 1.00 – 0.12 cm – caudal entotympanic bone ventrally inflated – curve line of anterior part of caudal entotympanic bone (external side) continuous – maxillary-palatine suture just behind main cusp of P^3.

4. DISCUSSION AND PROSPECTS

Genets constitute an ideal model for tackling a wide panel of nested evolutionary issues (see Gaubert et al., in press a). Their new classification, which represents a provisional number of 17 species, requires, however, additional investigations. A particular focus should concern the morphological and geographical delimitations of *G. cristata* (contact zone with *G. servalina*), *G. felina* (sympatry with *G. genetta*), *G. "schoutedeni"* and *G. "letabae"*, the latter two having -in addition- problematic species name attributions. Moreover, extended molecular studies will have to be undertaken in order to clarify the taxonomic boundaries within the large-spotted genet complex (see Crawford-Cabral and Fernandes, 2001) and the widely distributed common small-spotted genet *G. genetta.*

Genets are also a group of high conservation concern. Three of the recently identified species are restricted to rain forests and their biology and

status in the wild are totally unknown (*G. bourloni, G. cristata, G. poensis*). More dramatically, the king genet *G. poensis*, represented by 10 known specimens in collections, may no longer exist *in naturae* (last specimen collected in 1946; Gaubert, 2003b). The clarification of the taxonomy and evolutionary history of the genets is a necessary step towards appropriate measures of conservation. The delimitation of new taxa, the identification of recent clades suggesting on-going speciation processes (e.g., large-spotted genets) and the detection of hybrid zones should promote a dynamic conservation of the genus throughout Africa.

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