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Amphibian and reptile dataset across different land-use types in Guinea-Bissau, West Africa

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Abstract

Background

West Africa is exceptionally biodiverse, yet its wildlife remains largely understudied despite the rapid and ongoing land-use changes. Large swaths of Guinea-Bissau's landscape were historically characterized by native forest-savanna mosaics. However, key areas of savannah habitats have been converted to rice agroecosystems, and forests are being transformed into cashew monocultures at unprecedented rates. Amphibians and reptiles comprise some of the most threatened species by human-induced habitat change and yet are not as studied as other vertebrate terrestrial taxa. Here, we provide two comprehensive datasets on amphibians and reptiles (classes Testudines and Squamata) from northern Guinea-Bissau: (1) a standardized survey dataset (encompassing sampling events and occurrences) in forest fragments, cashew orchards, and rice paddies, and (2) an opportunistic dataset reporting occurrences across the entire study area. Standardized surveys were carried across 21 sampling sites, seven in each habitat type, while opportunistic surveys include all other records. For standardized surveys, a total of 703 amphibian and 265 reptile (class Squamata) encounters are reported, corresponding to nine and 13 taxa, respectively. Opportunistically, we report 62 amphibian and 93 reptile encounters, corresponding to 10 amphibian taxa, 25 Squamata taxa, and two turtles (class Testudines).

New information

Based on 126 sampling hours of both diurnal and nocturnal standardized surveys, in addition to opportunistic surveys, these datasets comprise the first overview for amphibians and reptiles in mainland Guinea-Bissau across two seasons and different habitat types. Each of the 968 standardized and 155 opportunistic occurrences corresponds to a genus or species and is accompanied by geographic coordinates, a timestamp, and, for standardized data, the land-use type. The datasets fill the distribution gaps in Guinea-Bissau of at least three species, including the frog *Hildebrandtia ornata*, the skink *Trachylepis keroanensis*, and the snake *Dendroaspis polylepis* – and include the rediscovery of the lizard *Latastia ornata* in Guinea-Bissau. Before this work, the *L. ornata* was only known from the 1938 holotype in Bafatá (ca. 60 km away from the study area) and, in 2023, from Guinea-Conakry (ca. 700 km away from the type specimen location).

Keywords

agroecosystems, habitat conversion, herpetofauna, species diversity, tropical forest, Wallacean shortfall, West Africa

Introduction

West Africa is a major biodiversity hotspot, with a high number of endemic species (Myers et al. 2000). The region has faced substantial habitat loss and degradation (Lewin et al. 2016), which is expected to continue (Powers and Jetz 2019). Yet, West Africa has been subject to very few ecological studies compared to other biodiversity hotspots, such as the Neotropics (Gardner et al. 2009, Gibson et al. 2011, Newbold et al. 2020).

Guinea-Bissau has been covered by native forest-savanna mosaics (Catarino et al. 2008), but its long history of agriculture has changed the landscape overtime (Temudo and Abrantes 2013). Rice (*Oryza* L.) has traditionally been cultivated for domestic use (Temudo and Abrantes 2013) and, together with groundnuts, comprised the core of the agricultural land in the country until the 20th century (Catarino et al. 2015). After the 1940's, cashew trees (*Anacardium occidentale* L.) – native to Northeast Brazil – started being systematically planted across the country (Temudo and Abrantes 2014). This global agricultural commodity (Rege and Lee 2023) has replaced most other forms of land use in Guinea-Bissau, especially since the 1980's (Temudo and Abrantes 2013). Today, agriculture is still the main source of livelihood in the country, with cashew nuts comprising the only cash crop for the economy of Guinea-Bissau (Temudo and Abrantes 2013), accounting for 90% of all exports (FAO 2021). The once highly complex bio-cultural landscapes in Guinea-Bissau are now threatened by the quick expansion of cashew orchards, which are homogenizing the landscape (Catarino et al. 2015).

Amphibians and reptiles (classes Testudines and Squamata) are among the most threatened vertebrates (Cox et al. 2022), but their responses to anthropogenic pressure are less studied than that of other taxa (e.g., invertebrates and birds; Newbold et al. 2014) and there is a strong geographical bias in the available literature, with efforts skewed toward temperate regions and the Neotropics (Guedes et al. 2023, Tan et al. 2023). This has led to species such as the West African lizard *Latastia ornata* Monard, 1940, being only known from one type locality specimen for over 80 years (Meiri et al. 2018, Pauwels et al. 2023), or the medically significant black mamba *Dendroaspis polylepis* Günther, 1864, having only a few scattered observations in West Africa when, in fact, its distribution is suspected to be continuous in the region (Chippaux and Jackson 2019). The Wallacean shortfall, particularly evident in West African herpetofauna, reflects this geographic bias in species distribution data, which has large implications for species' conservation (Hortal et al. 2015) and human well-being, as this lack of information, as seen with venomous snakes, contributes to a higher incidence of untreated snakebites (WHO 2023). Despite the scarcity of scientific studies, amphibians and reptiles are deeply embedded in the region's biocultural heritage (e.g., notwithstanding considerable levels of dislike towards snakes, Bissau-Guinean farmers often perceive snakes as protectors of the village and signs of a good harvest; Chaves et al. In press).

To help filling in the knowledge gap in amphibian and reptile distribution in West Africa, we provide two herpetofauna datasets resulting from standardized and opportunistic surveys across the study area. The habitat mosaic, encompassing forest remnants, cashew orchards, and rice paddies, was specifically chosen to detect a wide range of species associated with both open and closed habitats. Furthermore, it informs us of species that can be found in the expanding cashew orchards. Unconventionally, the surveys were carried out outside protected areas, which contributes further to overcoming the Wallacean Shortfall.

General description

Purpose: These two datasets, consisting of standardized surveys supplemented by opportunistic observations, provide the first comprehensive overview of amphibians and reptiles (classes Testudines and Squamata) across different land-use types in the Oio Province.

Additional information: The standardized surveys recorded a total of 968 observations, representing 9 amphibians and 13 squamates, respectively. The opportunistic surveys documented 155 records, representing 10 amphibians, 25 squamates, and 2 turtles. A subset of the amphibian diversity recorded during standardized surveys Fig. 1 and opportunistic encounters Fig. 2.

Sampling methods

Description: This study took place in northern Guinea-Bissau, Oio Province, in the surroundings of Djalicunda (12°19'49"N, 15°10'57"W) (Fig. 3). The region's landscape consists of scattered small tabancas (villages) surrounded by secondary forest and large areas of extensive smallholder agriculture. The semi-natural and agricultural areas create mosaics of mostly forest remnants, cashew orchards, and rice paddies. Within the region, cashew orchards are gaining prominence, leading to the clearing of some of the forest remnants (Temudo and Abrantes 2014). The area is mostly flat, below 50 m altitude, and has defined wet from June to October, and dry, from October to June, seasons (Catarino et al. 2008). The mean temperature in the country ranges between 25.9 and 27.1 °C, and the annual precipitation is between 1,200 mm in the northeast and 2,600 mm in the southwest (Catarino et al. 2008). The amphibian and reptile surveys were conducted mainly across three habitat types: forest remnants, cashew orchards, and rice paddies. The surveys took place in 21 study sites, seven of each habitat type.

Forest remnants in the study area are classified as secondary growth, as they are either heavily degraded or represent regrowth following human intervention (Catarino et al. 2008). In the surveyed forest remnant sites, products (e.g., wood, fruit, honey) are collected by local communities, and the ground is typically covered by leaf litter, and the canopy cover is $\geq 65\%$ (Dos Reis-Silva et al. 2025). Surveyed cashew orchard sites are monocultures subject to little management (i.e., no irrigation, no fertilizers). They are characterized by a dense canopy (usually $\geq 80\%$) about 6–10 meters above the ground, and the understory is cleared once a year to facilitate cashew nut harvest (Dos Reis-Silva et al. 2025). Rice paddies are in topographic depressions that flood naturally between late July and November, which coincides with the plantation and harvesting of rice, respectively (Sottomayor et al. 2024). They have few scattered trees throughout, presenting an open habitat without canopy cover.

Sampling description:

Standardized herpetofauna surveys: Data collection took place over two field campaigns in 2022. To maximize the number of recorded species given the strong seasonality in the study area, the first field campaign occurred at the end of the dry season (June/July) and the second one at the end of the wet season (October/November). For each campaign, all sampling sites were surveyed three times during the day (starting between 09h15 and 16h45) and once at night (starting between 19h00 and 22h45), totalling eight surveys at each of the 21 sites (six day- and two night-surveys).

Herpetofauna surveys took place across 21 circular study sites of 25 m radius in a time-standardized fashion (Dos Reis-Silva et al. 2025). Surveys were systematically conducted by one observer for 45 minutes, amounting to a total of 126 sampling hours: 94.5 h during daytime and 31.5 h during nighttime. In each survey, the study sites were thoroughly searched in a zigzag fashion and carefully checked for herpetofauna,

including underneath loose objects (e.g., dead wood, bark, leaf litter). We noted the date and time at the beginning of each survey. For each encounter (i.e., observed individual), species and genus were registered. At times, photos were used for ID confirmation. On some occasions, no animals were detected at a study site. These zero-encounter surveys, representing 45 of the 168 sampling events, were excluded from the dataset. This exclusion was necessary because the absence of observations cannot be confidently interpreted as true species absence (MacKenzie 2018).

Opportunistic herpetofauna surveys: These surveys took place throughout the study area and included all records collected outside of the standardized surveys' locations. As such, opportunistic surveys include all amphibians and reptiles (classes Squamata and Testudines) observed while commuting to and between sampling sites and at the accommodation surroundings. Additionally, specimens found by locals, whose identification we were able to confirm (e.g., road kills), were also included as opportunistic records.

Species identification: Herpetofauna was identified visually based on morphological characters. On some occasions deemed needed and safe, animals were caught for identification (e.g., ridge-count for frogs, scale-count for reptiles). Amphibians were identified with the aid of [AmphibiaWeb](#) (AmphibiaWeb 2022) and the scientific literature (Auliya et al. 2012, Pickersgill 2007). For reptile identification, [Reptile Database](#) (Uetz et al. 2024), and the field guides (Chippaux and Jackson 2019) for snakes and (Trape et al. 2012) for lizards and turtles (testudines) were used. Due to the lack of conclusive unique morphological characters for some species and several specimens hiding quickly, conclusive identification to species level was not always possible. Consequently, 412 observations of amphibians in the standardized dataset and 32 observations (27 amphibians and four squamates) in the opportunistic dataset were identified only at the genus level. Because the datasets only include specimens identified accurately to genus or species level, one record identified to the family Leptotyphlopidae was excluded.

Geographic coverage

Description: The study took place in northern Guinea-Bissau, Oio Province, in the surroundings of Djalicunda.

Coordinates:

Standardized surveys: Latitude: between 12.258 and 12.414; Longitude: between -15.17 and -15.238.

Opportunistic occurrences: Latitude: between 12.258 and 12.522; Longitude: between -15.169 and -15.238.

Taxonomic coverage

Description: Standardized surveys: This dataset includes a total of 703 amphibian and 265 squamates encounters, corresponding to nine amphibian and 13 squamate taxa (Table 1; Fig. 4; dos Reis-Silva et al. 2024b).

Opportunistic surveys: This dataset includes 62 amphibian, three testudines and 90 squamates encounters, corresponding to 10 amphibian taxa, two testudine taxa and 25 squamate taxa (Table 2; dos Reis-Silva et al. 2024a).

Taxa included:

| Rank | Scientific Name |
|---------|---|
| species | <i>Afrivalus vittiger</i> (Peters, 1876) |
| species | <i>Agama agama</i> (Linnaeus, 1758) |
| species | <i>Atractaspis aterrima</i> Günther, 1863 |
| species | <i>Bitis arietans</i> Merrem, 1820 |
| species | <i>Boaedon lineatus</i> Duméril, Bibron & Duméril, 1854 |
| species | <i>Causus maculatus</i> (Hallowell, 1842) |
| species | <i>Chamaeleo gracillis</i> Hallowell, 1844 |
| species | <i>Crotaphopeltis hotamboeia</i> (Laurenti, 1768) |
| species | <i>Dasypeltis confusa</i> Trape & Mané, 2006 |
| species | <i>Dasypeltis</i> sp. |
| species | <i>Dendroaspis polylepis</i> Günther, 1864 |
| species | <i>Elapsoidea semiannulata</i> Bocage, 1882 |
| species | <i>Hemidactylus angulatus</i> Hallowell, 1854 |
| species | <i>Hemisis</i> sp. |
| species | <i>Hildebrandtia ornata</i> (Peters, 1878) |
| species | <i>Hoplobatrachus occipitalis</i> (Günther, 1858) |
| species | <i>Hyperolius spatzi</i> Ahl, 1931 |
| species | <i>Kassina</i> sp. |
| species | <i>Kinixys belliana</i> Gray, 1831 |
| species | <i>Latastia ornata</i> Monard, 1940 |

| | |
|---------|--|
| species | <i>Leptopelis viridis</i> (Günther, 1869) |
| species | <i>Lychophidion albomaculatum</i> Steindachner, 1870 |
| species | <i>Lygodactylus gutturalis</i> (Bocage, 1873) |
| species | <i>Naja nigricollis</i> Reinhardt, 1843 |
| species | <i>Panaspis tristai</i> (Monard, 1940) |
| species | <i>Pelusios castaneus</i> (Schweigger, 1812) |
| species | <i>Phrynobatrachus</i> sp. |
| species | <i>Prosymna meleagris</i> (Reinhardt, 1843) |
| species | <i>Psammophis elegans</i> (Shaw, 1802) |
| species | <i>Psammophis</i> sp. |
| species | <i>Ptychadena</i> sp. |
| species | <i>Python regius</i> (Shaw, 1802) |
| species | <i>Sclerophrys regularis</i> (Reuss, 1833) |
| species | <i>Sclerophrys</i> sp. |
| species | <i>Tarentola senegambiae</i> Joger, 1984 |
| species | <i>Trachylepis affinis</i> (Gray, 1838) |
| species | <i>Trachylepis keroanensis</i> (Chabanaud, 1921) |
| species | <i>Trachylepis perrotetii</i> (Duméril & Bibron, 1839) |
| species | <i>Varanus niloticus</i> (Linnaeus, 1766) |

Temporal coverage

Data range: 2022-6-15 - 2022-11-06.

Notes: Standardized survey: 2022-06-18 to 2022-11-05; Opportunistic survey: 2022-06-15 to 2022-11-06

Usage licence

Usage licence: Other

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Data resources

Data package title: Amphibian and reptile dataset across different land-use types in Guinea-Bissau, West Africa

Resource link: <https://doi.org/10.15468/vv9xnb>; <https://doi.org/10.15468/dwectn>

Number of data sets: 2

Data set name: Standardized survey dataset of amphibian and reptile across different land-use types in Guinea-Bissau, West Africa

Character set: UTF-8

Download URL: http://ipt.gbif.pt/ipt/archive.do?r=gw_herpetol_dataset

Data format: Darwin Core Archive format

Description: A comprehensive dataset of standardized surveys of amphibians and reptiles (Testudines and Squamata) conducted primarily across forest fragments, cashew orchards, and rice paddies in northern Guinea-Bissau is presented. Standardized surveys were conducted at 21 sampling sites, with seven sites in each habitat type. A total of 703 amphibian and 265 reptile encounters were recorded, corresponding to nine and 13 taxa, respectively (Table X).

| Column label | Column description |
|--|--|
| eventID (Event core, Occurrence extension) | An identifier for the set of information associated with a dwc:Event (something that occurs at a place and time) |
| samplingProtocol (Event core) | The names of, references to, or descriptions of the methods or protocols used during a dwc:Event |
| samplingEffort (Event core) | The amount of effort expended during a dwc:Event |
| sampleSizeValue (Event core) | A numeric value for a measurement of the size (time duration, length, area, or volume) of a sample in a sampling dwc:Event |
| sampleSizeUnit (Event core) | The unit of measurement of the size (time duration, length, area, or volume) of a sample in a sampling dwc:Event |
| habitat (Event core) | A category or description of the habitat in which the dwc:Event occurred |
| eventDate (Event core) | The date-time or interval during which a dwc:Event occurred |
| eventTime (Event core) | The time or interval during which a dwc:Event occurred |
| country (Event core) | The name of the country or major administrative unit in which the dcterms:Location occurs |
| countryCode (Event core) | The standard code for the country in which the dcterms:Location occurs |

| | |
|---|---|
| decimalLatitude (Event core) | The geographic latitude (in decimal degrees, using the spatial reference system given in dwc:geodeticDatum) of the geographic center of a dcterms:Location |
| decimalLongitude (Event core) | The geographic longitude (in decimal degrees, using the spatial reference system given in dwc:geodeticDatum) of the geographic center of a dcterms:Location |
| coordinateUncertaintyInMeters (Event core) | The horizontal distance (in metres) from the given dwc:decimalLatitude and dwc:decimalLongitude describing the smallest circle containing the whole of the dcterms:Location |
| geodeticDatum (Event core) | The ellipsoid, geodetic datum, or spatial reference system (SRS) upon which the geographic coordinates given in dwc:decimalLatitude and dwc:decimalLongitude is based |
| ownerInstitutionCode (Event core) | The name (or acronym) in use by the institution having ownership of the object(s) or information referred to in the record |
| institutionID (Event core) | An identifier for the institution having custody of the object(s) or information referred to in the record |
| institutionCode (Event core) | The name (or acronym) in use by the institution having custody of the object(s) or information referred to in the record |
| basisOfRecord (Occurrence extension) | The specific nature of the data record |
| individualCount (Occurrence extension) | The number of individuals present at the time of the dwc:Occurrence |
| organismQuantity (Occurrence extension) | A number or enumeration value for the quantity of dwc:Organisms |
| organismQuantityType (Occurrence extension) | The type of quantification system used for the quantity of dwc:Organisms |
| occurrenceStatus (Occurrence extension) | A statement about the presence or absence of a dwc:Taxon at a dcterms:Location |
| scientificName (Occurrence extension) | The full scientific name, with authorship and date information if known. When forming part of a dwc:Identification, this should be the name in lowest level taxonomic rank that can be determined |
| kingdom (Occurrence extension) | The full scientific name of the kingdom in which the dwc:Taxon is classified |
| phylum (Occurrence extension) | The full scientific name of the phylum or division in which the dwc:Taxon is classified |
| class (Occurrence extension) | The full scientific name of the class in which the dwc:Taxon is classified |
| order (Occurrence extension) | The full scientific name of the order in which the dwc:Taxon is classified |
| family (Occurrence extension) | The full scientific name of the family in which the dwc:Taxon is classified |

| | |
|--|--|
| genus (Occurrence extension) | The full scientific name of the genus in which the dwc:Taxon is classified |
| specificEpithet (Occurrence extension) | The name of the first or species epithet of the dwc:scientificName |
| taxonRank (Occurrence extension) | The taxonomic rank of the most specific name in the dwc:scientificName |
| recordedBy (Occurrence extension) | A person, group, or organization responsible for recording the original dwc:Occurrence |
| parentEventID (event core) | An identifier for the broader dwc:Event that groups this and potentially other dwc:Events. In this case, a broader category for a sampling site. |
| occurrenceID (Occurrence extension) | An identifier for the dwc:Occurrence (as opposed to a particular digital record of the dwc:Occurrence). |

Data set name: Opportunistic records of amphibian and reptile across different land-use types in Guinea-Bissau, West Africa

Character set: UTF-8

Download URL: http://ipt.gbif.pt/ipt/archive.do?r=gw_herpetol_occurr_dataset

Data format: Darwin Core Archive format

Description: A comprehensive dataset of opportunistic surveys of amphibians and reptiles conducted in northern Guinea-Bissau, Oio Province, in the surroundings of Djalicunda. Opportunistic surveys yielded 62 amphibian, three testudines and 90 squamates encounters, corresponding to 10 amphibian taxa, two testudine taxa and 25 squamate taxa

| Column label | Column description |
|----------------|---|
| occurrenceID | An identifier for the dwc:Occurrence (as opposed to a particular digital record of the dwc:Occurrence) |
| basisOfRecord | The specific nature of the data record |
| eventDate | The date-time when the dwc:Event was recorded |
| eventTime | The time or interval during which a dwc:Event occurred |
| scientificName | The full scientific name, with authorship and date information if known. When forming part of a dwc:Identification, this should be the name in lowest level taxonomic rank that can be determined |
| kingdom | The full scientific name of the kingdom in which the dwc:Taxon is classified |
| phylum | The full scientific name of the phylum or division in which the dwc:Taxon is classified |
| class | The full scientific name of the class in which the dwc:Taxon is classified |
| order | The full scientific name of the order in which the dwc:Taxon is classified |

| | |
|-------------------------------|---|
| family | The full scientific name of the family in which the dwc:Taxon is classified |
| genus | The full scientific name of the genus in which the dwc:Taxon is classified |
| specificEpithet | The name of the first or species epithet of the dwc:scientificName |
| taxonRank | The taxonomic rank of the most specific name in the dwc:scientificName |
| lifeStage | The age class or life stage of the dwc:Organism(s) at the time the dwc:Occurrence was recorded |
| decimalLatitude | The geographic latitude (in decimal degrees, using the spatial reference system given in dwc:geodeticDatum) of the geographic center of a dcterms:Location |
| decimalLongitude | The geographic longitude (in decimal degrees, using the spatial reference system given in dwc:geodeticDatum) of the geographic center of a dcterms:Location |
| coordinateUncertaintyInMeters | The horizontal distance (in meters) from the given dwc:decimalLatitude and dwc:decimalLongitude describing the smallest circle containing the whole of the dcterms:Location |
| geodeticDatum | The ellipsoid, geodetic datum, or spatial reference system (SRS) upon which the geographic coordinates given in dwc:decimalLatitude and dwc:decimalLongitude are based |
| country | he name of the country or major administrative unit in which the dcterms:Location occurs |
| countryCode | The standard code for the country in which the dcterms:Location occurs |
| institutionID | An identifier for the institution having custody of the object(s) or information referred to in the record |
| institutionCode | The name (or acronym) in use by the institution having custody of the object(s) or information referred to in the record |
| recordedBy | A list (concatenated and separated) of names of people, groups, or organizations responsible for recording the original dwc:Occurrence |
| individualCount | The number of individuals present at the time of the dwc:Occurrence |
| organismQuantity | A number or enumeration value for the quantity of dwc:Organisms |
| organismQuantityType | The type of quantification system used for the quantity of dwc:Organisms |

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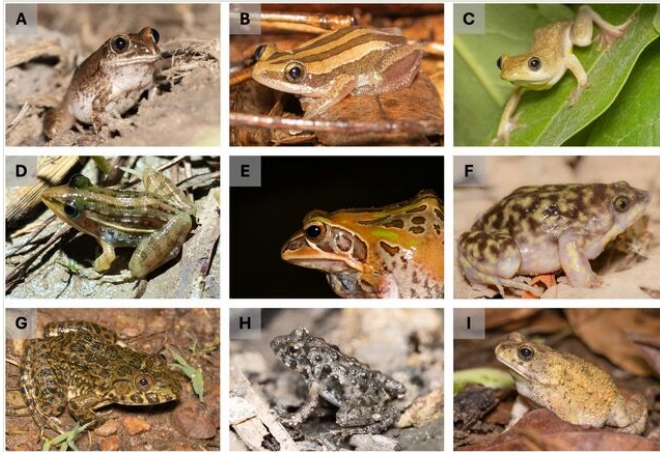


Figure 1.

Some of the amphibians observed. **A** *Leptopelis viridis*, **B** *Afrixalus vittiger*, **C** *Hyperolius spatzi*, **D** *Ptycadena* sp., **E** *Hildebrandtia ornata*, **F** *Hemisus* sp., **G** *Hoplobatrachus occipitalis*, **H** *Phrynobatrachus* sp., and **I** *Slerophrys* sp. Photo credits: Francisco dos Reis-Silva.

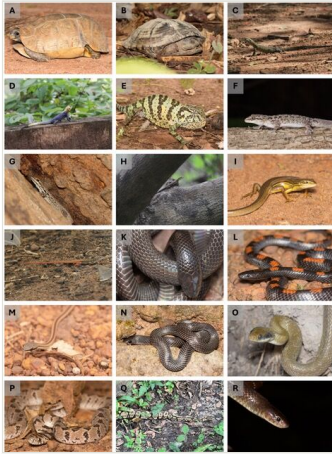


Figure 2.

Some of the reptiles observed. **A** *Kinixis belliana*, **B** *Pelusios castaneus*, **C** *Varanus niloticus*, **D** *Agama agama*, **E** *Chamaeleo gracillis*, **F** *Hemidactylus angulatus*, **G** *Lygodactylus gutturalis*, **H** *Trachylepis affinis*, **I** *Trachylepis keroanensis*, **J** *Latastia ornata*, **K** *Atractaspis aterrima*, **L** *Lycophidion albomaculatum*, **M** *Psammophis elegans*, **N** *Prosymna meleagris*, **O** *Crotaphopeltis hotamboeia*, **P** *Dasypeltis confusa*, **Q** *Python regius* and **R** *Elapsoidea semiannulata*. Photo credits: Francisco dos Reis-Silva (A, B, E, F, G, I, K, L, M, N, O, P), Ricardo Rocha (C, D, H, J) and Cristian Pizzigalli (Q).

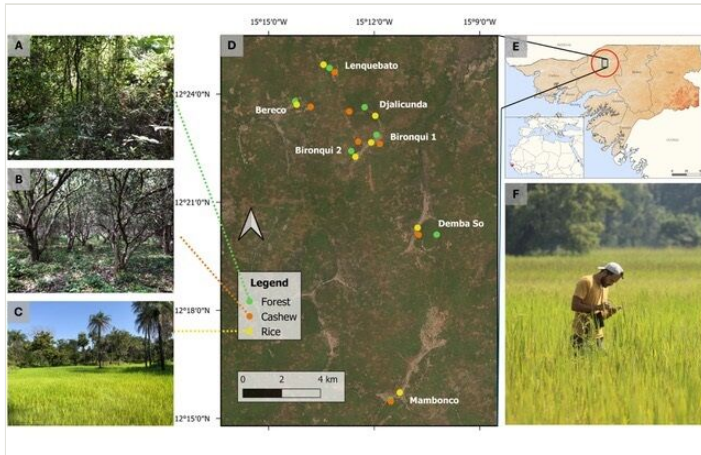


Figure 3.

Study area and surveyed habitat types. **A** Forest remnants. **B** Cashew orchards. **C** Rice paddies. **D** Overview of the study area, including study sites (colored dots corresponding to the habitat type on the legend). **E** Study area in northern Guinea-Bissau. **F** Example of a survey conducted in a rice paddy. Map sources: GADM (2021) and geoBoundaries (2017). Photos: Francisco Reis-Silva.

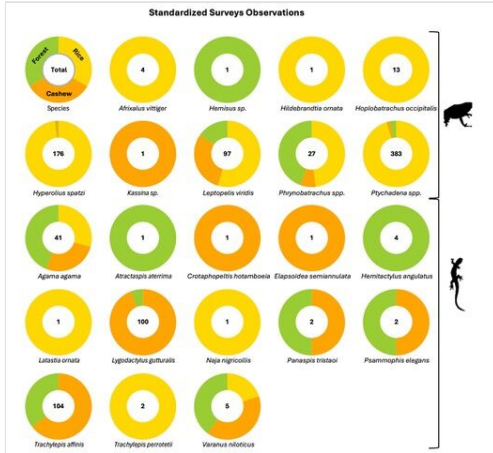


Figure 4. Amphibians and reptiles recorded during standardized surveys and corresponding proportion per habitat-type.

Table 1.

Amphibian and reptile (Squamata) observations during standardised surveys in northern Guinea-Bissau, West Africa.

| Class | Family | Species | Number of observations |
|----------|-------------------|--|------------------------|
| Amphibia | Arthroleptidae | <i>Leptopelis viridis</i> (Günther, 1869) | 97 |
| | Hyperoliidae | <i>Afrivalus vittiger</i> (Peters, 1876) | 4 |
| | Hyperoliidae | <i>Hyperolius spatzi</i> Ahl, 1931 | 176 |
| | Hyperoliidae | <i>Kassina</i> sp. | 1 |
| | Ptychadenidae | <i>Ptychadena</i> sp. | 383 |
| | Ptychadenidae | <i>Hildebrandtia ornata</i> (Peters, 1878) | 1 |
| | Hemisotidae | <i>Hemisus</i> sp. | 1 |
| | Dicroglossidae | <i>Hoplobatrachus occipitalis</i> (Günther, 1858) | 13 |
| | Phrynobatrachidae | <i>Phrynobatrachus</i> sp. | 27 |
| Squamata | Varanidae | <i>Varanus niloticus</i> (Linnaeus, 1766) | 5 |
| | Agamidae | <i>Agama agama</i> (Linnaeus, 1758) | 41 |
| | Gekkonidae | <i>Hemidactylus angulatus</i> Hallowell, 1854 | 4 |
| | Gekkonidae | <i>Lygodactylus gutturalis</i> (Bocage, 1873) | 100 |
| | Scincidae | <i>Trachylepis affinis</i> (Gray, 1838) | 104 |
| | Scincidae | <i>Trachylepis perrotetii</i> (Duméril & Bibron, 1839) | 2 |
| | Scincidae | <i>Panaspis tristaoi</i> (Monard, 1940) | 2 |
| | Lacertidae | <i>Latastia ornata</i> (Monard, 1940) | 1 |
| | Lamprophiidae | <i>Atractaspis aterrima</i> Günther, 1863 | 1 |
| | Lamprophiidae | <i>Psammophis elegans</i> (Shaw, 1802) | 2 |
| | Colubridae | <i>Crotaphopeltis hotamboeia</i> (Laurenti, 1768) | 1 |
| | Elapidae | <i>Elapsoidea semiannulata</i> Bocage, 1882 | 1 |
| | Elapidae | <i>Naja nigricollis</i> Reinhardt, 1843 | 1 |

Table 2.

Amphibian and reptile (classes Testudines and Squamata) opportunistically detected in Guinea-Bissau, West Africa

| Class | Family | Species | Number of observations |
|------------|--|---|------------------------|
| Amphibia | Arthroleptidae | <i>Leptopelis viridis</i> (Günther, 1869) | 15 |
| | Hyperoliidae | <i>Afrivalus vittiger</i> (Peters, 1876) | 4 |
| | Hyperoliidae | <i>Hyperolius spatzi</i> Ahl, 1931 | 8 |
| | Ptychadenidae | <i>Ptychadena</i> sp. | 9 |
| | Ptychadenidae | <i>Hildebrandtia ornata</i> (Peters, 1878) | 1 |
| | Hemisotidae | <i>Hemisis</i> sp. | 2 |
| | Dicroglossidae | <i>Hoplobatrachus occipitalis</i> (Günther, 1858) | 6 |
| | Phrynobatrachidae | <i>Phrynobatrachus</i> sp. | 3 |
| | Bufoidea | <i>Sclerophrys</i> sp. | 13 |
| | Bufoidea | <i>Sclerophrys regularis</i> (Reuss, 1833) | 1 |
| Testudines | Testudinidae | <i>Kinixys belliana</i> Gray, 1831 | 2 |
| | Pelomedusidae | <i>Pelusios castaneus</i> (Schweigger, 1812) | 1 |
| Squamata | Varanidae | <i>Varanus niloticus</i> (Linnaeus, 1766) | 16 |
| | Agamidae | <i>Agama agama</i> (Linnaeus, 1758) | 7 |
| | Chamaeleonidae | <i>Chamaeleo gracillis</i> Hallowell, 1844 | 11 |
| | Gekkonidae | <i>Hemidactylus angulatus</i> Hallowell, 1854 | 7 |
| | Gekkonidae | <i>Lygodactylus gutturalis</i> (Bocage, 1873) | 5 |
| | Phyllodactylidae | <i>Tarentola senegambiae</i> Joger, 1984 | 2 |
| | Scincidae | <i>Trachylepis affinis</i> (Gray, 1838) | 2 |
| | Scincidae | <i>Trachylepis keroanensis</i> (Chabanaud, 1921) | 3 |
| | Scincidae | <i>Trachylepis perrotetii</i> (Duméril & Bibron, 1839) | 5 |
| | Scincidae | <i>Panaspis tristatoi</i> (Monard, 1940) | 2 |
| | Lacertidae | <i>Latastia ornata</i> Monard, 1940 | 4 |
| | Lamprophiidae | <i>Boaedon lineatus</i> Duméril, Bibron & Duméril, 1854 | 2 |
| | Lamprophiidae | <i>Lychophidion albomaculatum</i> Steindachner, 1870 | 3 |
| | Lamprophiidae | <i>Psammophis</i> sp. | 4 |
| | Lamprophiidae | <i>Psammophis elegans</i> (Shaw, 1802) | 1 |
| | Prosymnidae | <i>Prosymna meleagris</i> (Reinhardt, 1843) | 3 |
| | Colubridae | <i>Crotaphopeltis hotamboeia</i> (Laurenti, 1768) | 2 |
| | Colubridae | <i>Dasypeltis</i> sp. | 1 |
| | Colubridae | <i>Dasypeltis confusa</i> Trape & Mané, 2006 | 1 |
| | Pythonidae | <i>Python regius</i> (Shaw, 1802) | 2 |
| Elapidae | <i>Dendroaspis polylepis</i> Günther, 1864 | 1 | |

| | | |
|-----------|---|---|
| Elapidae | <i>Elapsoidea semiannulata</i> Bocage, 1882 | 2 |
| Elapidae | <i>Naja nigricollis</i> Reinhardt, 1843 | 1 |
| Viperidae | <i>Bitis arietans</i> Merrem, 1820 | 2 |
| Viperidae | <i>Causus maculatus</i> (Hallowell, 1842) | 1 |