Table S1: Recorded anuran species in the study area

| No. | Scientific name | IUCN status |
|---|---|---|
| 1 | *Amietia nutti* | Least Concern (LC) |
| 2 | *Conraua beccarii* | Least Concern (LC) |
| 3 | *Hoplobatrachus occipitalis* | Least Concern (LC) |
| 4 | *Hyperolius viridiflavus* | Least Concern (LC) |
| 5 | *Kassina senegalensis* | Least Concern (LC) |
| 6 | *Phrynobatrachus natalensis* | Least Concern (LC) |
| 7 | *Phrynobatrachus* sp.1 | - |
| 8 | *Ptychadena anchietae* | Least Concern |
| 9 | *Ptychadena baroensis* | not assessed on the IUCN Red List (recently described |
| 10 | *Ptychadena neumanni* | Least Concern (LC) |
| 11 | *Ptychadena nilotica* | Least Concern (LC) |
| 12 | *Sclerophrys garmani* | Least Concern (LC) |
| 13 | *Sclerophrys gutturalis* | Least Concern (LC) |
| 14 | *Sclerophrys regularis* | Least Concern (LC) |
| 15 | *Sclerophrys xeros* | Least Concern (LC) |
| 16 | *Xenopus clivii* | Least Concern (LC) |

Table S2: Data of sequenced specimen (Collection ID, Gene Bank accession number, year of collection, location and geographic coordinates [decimal degrees])

| Species | ID | Accession No. | Year | Location | Latitude | Longitude |
|---|---|---|---|---|---|---|
| *Ptychadena baroensis* | WA0040 | PX070080 | 2022 | Shoshuma | 6.9667 | 36.6333 |
| *Ptychadena baroensis* | WA0042 | PX070081 | 2022 | Gudumu | 6.9375 | 36.5200 |
| *Ptychadena baroensis* | WA0044 | PX070082 | 2022 | Shoshuma | 6.9683 | 36.6357 |
| *Ptychadena neumanni / P. harenna* | WA0041 | PX070078 | 2022 | Shoshuma | 6.9699 | 36.6359 |
| *Ptychadena neumanni / P. harenna* | WA0059 | PX070079 | 2024 | Shita | 6.9583 | 36.6125 |
| *Sclerophrys regularis* | WA0048 | PX070088 | 2023 | Gudumu | 6.9391 | 36.5202 |
| *Sclerophrys regularis* | WA0054 | PX070089 | 2024 | Shita | 6.9566 | 36.6152 |
| *Phrynobatrachus natalensis* | WA0001 | PX070090 | 2022 | Gudumu | 6.9407 | 36.5204 |
| *Hoplobatrachus occipitalis* | WA0051 | PX070084 | 2024 | Yora | 6.9058 | 36.5982 |
| *Hoplobatrachus occipitalis* | WA0052 | PX070085 | 2024 | Yora | 6.9042 | 36.5917 |
| *Hoplobatrachus occipitalis* | WA0058 | PX070086 | 2024 | Shoshuma | 6.9715 | 36.6361 |
| *Hoplobatrachus occipitalis* | WA0074 | PX070087 | 2022 | Bahi | 6.9750 | 36.5650 |

Table S3. Life-stage composition of anuran species recorded in Chebera Churchura National Park. Life stages are classified as adult (adu), juvenile (juv), and metamorph/froglet (met). Sex was determined for adults when secondary sexual characters were visible.

| Species | adu | juv | met | Sex Determination |
|---|---|---|---|---|
| *Amietia nutti* | 82 | 34 | 13 | calling males |
| *Conraua beccarii* | 210 | 64 | 27 | large adults: sex rarely determined |
| *Hoplobatrachus occipitalis* | 171 | 61 | 21 | calling males |
| *Hyperolius viridiflavus* | 58 | 19 | 5 | calling males |
| *Kassina senegalensis* | 33 | 14 | 4 | sex of adults occasionally visible |
| *Phrynobatrachus natalensis* | 69 | 28 | 13 | small size limited sexing |
| *Phrynobatrachus* sp.1 | 9 | 5 | 0 | not determined |
| *Ptychadena anchietae* | 287 | 96 | 25 | strong seasonal recruitment |
| *Ptychadena baroensis* | 38 | 14 | 4 | sex of adults identified morphologically |
| *Ptychadena neumanni / P. harenna* | 9 | 3 | 0 | limited sample size |
| *Ptychadena nilotica* | 87 | 32 | 11 | breeding during wet season |
| *Sclerophrys garmani* | 51 | 26 | 9 | juveniles common in woodland |
| *Sclerophrys gutturalis* | 72 | 31 | 12 | dry-season activity notable |
| *Sclerophrys regularis* | 89 | 27 | 11 | males calling after rain |
| *Sclerophrys xeros* | 38 | 11 | 4 | disturbance-tolerant species |