**Appendix S1.** List of bird species recorded at the Fazenda Pau d’Arco, Chapada do Araripe, Ceará, Brazil, and their respective quantitative abundance, status (endemism, migration, and conservation), method of detection, and type of documentation available for each species. Abundance refers to the proportion of detections obtained during our point counts. Abbreviations refer to subjective abundance categories, including C (common), U (uncommon), R (rare), and O (occasional). See definitions at the bottom of the appendix\*. We only included quantitative data for those species recorded during our standardized surveys. Status refers to the degree of endemism, Brazilian and global threat, and migration. Endemism categories are based on Pacheco (2004) and Billerman *et al*. (2020) and our unpublished data. Endemism categories include Caa (Caatinga endemic), NE (northeastern Brazilian endemic), Br (Brazilian endemic). Threatened categories include NT (Near threatened), VU (Vulnerable. Migration categories follow Somenzari *et al*. (2018) and Jahn *et al*. (2020) and include the following categories: NA (Neotropical Austral migrant) and LM (Longitudinal migrant). Conservation status refers to global (IUCN 2020) followed by Brazilian national status (MMA 2018). The survey method represents how each species was recorded by us, including: O (opportunistic observations), PC (point counts), ME (mobbing experiments), MN (mist-nets), and X (all sampling methods). Doc refers to documentation and includes: P (photographs), R (audio recordings), and S (specimens, all of which are held at the Ornithological Collection of the Federal University of Pernambuco, UFPE). On each specific column, we include voucher numbers, which refer to: WA (Wikiaves); XC (Xenocanto); and ML (Macaulay Library). Other codes refer to photographs or audio recordings in our private collections which are in the process of being deposited in the above-mentioned repositories. Species that lack the survey method were recorded by other researchers/observers. Nomenclature and taxonomy follow Piacentini *et al*. 2015 and CBRO (*in prep*.).

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Taxa | Abundance\* | Status | | | Survey method | Doc. | Photo | Audio | Specimens/Notes |
|  |  | End. | Threat | Migr. |  |  |  |  |  |
| TINAMIDAE |  |  |  |  |  |  |  |  |  |
| *Crypturellus zabele* | R | Br | NT/VU |  | O |  |  |  | P. Maier (obs.) |
| *Crypturellus parvirostris* | R (0.006) |  |  |  | O PC | R |  | ML308533741 |  |
| *Crypturellus tataupa* | U (0.013) |  |  |  | O PC | R |  | ML309468441 |  |
| *Rhynchotus rufescens* | O |  |  |  | O | R |  | WA2142294 |  |
| *Nothura maculosa* | R |  |  |  | O |  |  |  | F.M. Las-Casas (obs.) |
|  |  |  |  |  |  |  |  |  |  |
| CRACIDAE |  |  |  |  |  |  |  |  |  |
| *Penelope superciliaris* | U (0.013) |  |  |  | O PC | P R | ML309682871 | ML308813921 |  |
|  |  |  |  |  |  |  |  |  |  |
| COLUMBIDAE |  |  |  |  |  |  |  |  |  |
| *Leptotila verreauxi* | C (0.054) |  |  |  | O PC | R |  | ML309130921 |  |
| *Claravis pretiosa* | R |  |  |  | O | R |  | WA1656132 |  |
| *Columbina talpacoti* | R |  |  |  | O | R |  | ML308817031 |  |
|  |  |  |  |  |  |  |  |  |  |
| CUCULIDAE |  |  |  |  |  |  |  |  |  |
| *Crotophaga ani* | R |  |  |  | O |  |  |  |  |
| *Tapera naevia* | R (0.003) |  |  |  | O PC |  |  |  |  |
| *Piaya cayana* | U (0.010) |  |  |  | O PC | R |  | ML309151131 |  |
| *Coccyzus melacoryphus* | R (0.003) |  |  | NA | PC ME |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| NYCTIBIIDAE |  |  |  |  |  |  |  |  |  |
| *Nyctibius griseus* | R |  |  |  | O |  |  |  | W. Girão (obs.) |
|  |  |  |  |  |  |  |  |  |  |
| CAPRIMULGIDAE |  |  |  |  |  |  |  |  |  |
| *Antrostomus rufus* | R |  |  |  | O | P | WA2076703 |  |  |
| *Nyctidromus albicollis* | O |  |  |  | O | P | WA2077903 |  |  |
| *Hydropsalis parvula* | R |  |  | NA | O |  |  |  |  |
| *Hydropsalis torquata* | R |  |  |  | O MN | P S | WA2077901 |  | UFPE 4985 |
|  |  |  |  |  |  |  |  |  |  |
| APODIDAE |  |  |  |  |  |  |  |  |  |
| *Chaetura meridionalis* | R |  |  |  | O PC |  |  |  |  |
| *Tachornis squamata* | R |  |  |  | O |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| TROCHILIDAE |  |  |  |  |  |  |  |  |  |
| *Chrysolampis mosquitus* | C (0.067) |  |  |  | PC ME |  |  |  |  |
| *Heliomaster squamosus* | R (0.003) | Br |  |  | PC |  |  |  |  |
| *Chlorostilbon lucidus* | A (0.233) |  |  |  | PC ME MN | P S | WA1898456 |  | UFPE 5401 |
| *Eupetomena macroura* | U (0.010) |  |  |  | O PC |  |  |  |  |
| *Chionomesa fimbriata* | U (0.044) |  |  |  | X | S |  |  | UFPE 5406 |
|  |  |  |  |  |  |  |  |  |  |
| CHARADRIIDAE |  |  |  |  |  |  |  |  |  |
| *Vanellus chilensis* | R |  |  |  | O PC | P | ML309698551 |  |  |
|  |  |  |  |  |  |  |  |  |  |
| *CATHARTIDAE* |  |  |  |  |  |  |  |  |  |
| *Coragyps atratus* | U (0.010) |  |  |  | O PC | P | ML309642991 |  |  |
| *Cathartes aura* | R (0.003) |  |  |  | O PC | P | WA98111 |  |  |
|  |  |  |  |  |  |  |  |  |  |
| ACCIPITRIDAE |  |  |  |  |  |  |  |  |  |
| *Accipiter striatus* | R |  |  |  | O | S |  |  | UFPE 6336 |
| *Rupornis magnirostris* | U (0.016) |  |  |  | O PC | R |  | WA1657468 |  |
| *Buteo nitidus* | R (0.003) |  |  |  | O PC |  |  |  |  |
| *Buteo brachyurus* | R (0.006) |  |  |  | O PC | R |  | WA1485415 |  |
|  |  |  |  |  |  |  |  |  |  |
| STRIGIDAE |  |  |  |  |  |  |  |  |  |
| *Megascops choliba* | O |  |  |  | O | P | WA2064012 |  | W. Girão, A. Arrais (obs.) |
| *Glaucidium brasilianum* | R |  |  |  | O |  |  |  | W. Girão, A. Arrais (obs.) |
| *Aegolius harrisi* | R |  |  |  | O |  |  |  | W. Girão, A. Arrais (obs.) |
| *Asio clamator* | R |  |  |  | O | R |  | WA2063697 | W. Girão, A. Arrais (obs.) |
|  |  |  |  |  |  |  |  |  |  |
| TROGONIDAE |  |  |  |  |  |  |  |  |  |
| *Trogon curucui* | C (0.091) |  |  |  | O PC ME | P R | ML309477551 | ML309140001 |  |
|  |  |  |  |  |  |  |  |  |  |
| GALBULIDAE |  |  |  |  |  |  |  |  |  |
| *Galbula ruficauda* | R (0.006) |  |  |  | O PC MN | P S | ML309682921 |  | UFPE 5393 |
|  |  |  |  |  |  |  |  |  |  |
| BUCCONIDAE |  |  |  |  |  |  |  |  |  |
| *Nystalus maculatus* | R |  |  |  | O |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| PICIDAE |  |  |  |  |  |  |  |  |  |
| *Picumnus pygmaeus* | U (0.020) | Caa |  |  | O PC MN | P R S | ML309480031 | ML52697691 | UFPE 4975 |
| *Picumnus limae* | R (0.006) | Caa |  |  | X | R S |  | ML308829581 | UFPE 5977 |
| *Veniliornis passerinus* | U (0.027) |  |  |  | O PC ME | P | ML309643001 |  |  |
| *Campephilus melanoleucos* | R |  |  |  | O |  |  |  |  |
| *Celeus ochraceus* | C (0.050) | Br |  |  | O PC ME | P R | WA1676735 | ML309150041 |  |
| *Piculus chrysochloros* | U (0.010) |  |  |  | PC ME | P | WA2147567 |  |  |
| *Colaptes melanochloros* | R |  |  |  | O |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| CARIAMIDAE |  |  |  |  |  |  |  |  |  |
| *Cariama cristata* | R |  |  |  | O |  |  |  | P. Maier (obs.) |
|  |  |  |  |  |  |  |  |  |  |
| FALCONIDAE |  |  |  |  |  |  |  |  |  |
| *Caracara plancus* | R |  |  |  | O PC | P | WA1617795 |  |  |
| *Herpetotheres cachinnans* | R |  |  |  | O |  |  |  |  |
| *Micrastur ruficollis* | R (0.006) |  |  |  | PC |  |  |  |  |
| *Micrastur semitorquatus* | R |  |  |  | O |  |  |  | W. Girão, A. Arrais (obs.) |
|  |  |  |  |  |  |  |  |  |  |
| PSITTACIDAE |  |  |  |  |  |  |  |  |  |
| *Eupsittula cactorum* | C (0.162) | Caa |  |  | O PC ME | P R | WA1681716 | ML308556411 |  |
| *Forpus xanthopterygius* | R |  |  |  | O |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| THAMNOPHILIDAE |  |  |  |  |  |  |  |  |  |
| *Myrmorchilus strigilatus* | A (0.501) |  |  |  | X | P R S | WA1320650 | ML249955271 | UFPE 5444, 5956 |
| *Formicivora melanogaster* | A (0.345) |  |  |  | X | P S | WA1677205 |  | UFPE 4945, 4978, 4981, 4994, 4995 |
| *Herpsilochmus sellowi* | A (0.413) |  |  |  | X | P R S | WA1654809 | ML249964051 | UFPE 4961, 4972, 4986,5325, 5337, 5399 |
| *Sakesphorus cristatus* | A (0.481) | Caa |  |  | X | P R S | WA1321672 | ML308824071 | UFPE 4953, 4988, 4993, 4998 |
| *Thamnophilus capistratus* | C (0.111) | NE |  |  | X | P R S | ML309708431 | ML308823071 | UFPE 4960, 5404, 5978 |
| *Thamnophilus torquatus* | U (0.016) |  |  |  | O PC ME | R |  | WA1487223 |  |
| *Thamnophilus pelzelni* | A (0.311) | Br |  |  | X | P R S | WA1321666 | ML309470591 | UFPE 5312, 5335, 5400 |
| *Taraba major* | U (0.023) |  |  |  | PC ME | R |  | WA1662647 |  |
|  |  |  |  |  |  |  |  |  |  |
| GRALLARIDAE |  |  |  |  |  |  |  |  |  |
| *Hylopezus ochroleucus* | A (0.430) | Caa | NT |  | O PC | P R | ML173354681 | ML249964121 |  |
|  |  |  |  |  |  |  |  |  |  |
| SCLERURIDAE |  |  |  |  |  |  |  |  |  |
| *Sclerurus cearensis* | C (0.057) | NE | VU/VU |  | X | P R S | WA2006403 | WA1490170 | UFPE 4990 |
|  |  |  |  |  |  |  |  |  |  |
| DENDROCOLAPTIDAE |  |  |  |  |  |  |  |  |  |
| *Sittasomus griseicapillus* | U (0.023) |  |  |  | X | P S | WA1320675 |  | UFPE 4971 |
| *Campylorhamphus trochilirostris* | C (0.054) |  |  |  | X | P R S | ML173352941 | WA1657502 | UFPE 4984, 5004 |
| *Lepidocolaptes angustirostris* | R |  |  |  | O PC | R |  | ML308549831 |  |
|  |  |  |  |  |  |  |  |  |  |
| FURNARIIDAE |  |  |  |  |  |  |  |  |  |
| *Furnarius figulus* | R | Br |  |  | O |  |  |  |  |
| *Furnarius leucopus* | R |  |  |  | O |  |  |  |  |
| *Megaxenops parnaguae* | A (0.338) | NE |  |  | X | P R S | ML173350701 | WA1653640 | UFPE 4954, 4957, 5000, 5005, 5971 |
| *Phacellodomus rufifrons* | C (0.105) |  |  |  | X | P R S | WA1320708 | ML249955461 | UFPE 4950, 5333, 5334 |
| *Synallaxis hellmayri* | A (0.325) | Caa |  |  | O PC MN | P R S | WA2064010 | WA1657458 | UFPE 4956, 4979, 4982, 4997, 5328 |
| *Synallaxis frontalis* | U (0.047) |  |  |  | X | P R S | WA1677207 | ML309423721 | UFPE 5316, 5317 |
| *Synallaxis albescens* | R |  |  |  | O |  |  |  |  |
| *Synallaxis scutata* | C (0.067) |  |  |  | X | R S |  | ML308544371 | UFPE 4944, 5398, 5403 |
| *Cranioleuca semicinerea* | C (0.135) | Br |  |  | X | P R S | ML309542231 | ML308541471 | UFPE 5402 |
|  |  |  |  |  |  |  |  |  |  |
| PIPRIDAE |  |  |  |  |  |  |  |  |  |
| *Neopelma pallescens* | C (0.091) |  |  |  | X | P R S | WA2087858 | ML309455331 | UFPE 4958 ,4959, 4962, 5340 |
|  |  |  |  |  |  |  |  |  |  |
| TITYRIDAE |  |  |  |  |  |  |  |  |  |
| *Pachyramphus viridis* | R |  |  |  | O | R |  | ML309445061 |  |
| *Pachyramphus polychopterus* | R (0.003) |  |  | NA | O PC | R |  | ML309441091 |  |
|  |  |  |  |  |  |  |  |  |  |
| RHYNCHOCYCLIDAE |  |  |  |  |  |  |  |  |  |
| *Tolmomyias flaviventris* | C (0.108) |  |  |  | X | R S |  | ML309448681 | UFPE 4949 |
| *Todirostrum cinereum* | C (0.189) |  |  |  | O PC ME | R |  | ML309450271 |  |
| *Hemitriccus margaritaceiventer* | A (0.294) |  |  |  | X | P R S | ML173353511 | ML309460011 | UFPE 4976, 4980, 4983, 5336 |
|  |  |  |  |  |  |  |  |  |  |
| TYRANNIDAE |  |  |  |  |  |  |  |  |  |
| *Stigmatura napensis* | U (0.047) |  |  |  | O PC |  |  |  |  |
| *Stigmatura budytoides* | R |  |  |  | PC |  |  |  |  |
| *Euscarthmus meloryphus* | C (0.189) |  |  |  | O PC ME | R |  | ML309134901 |  |
| *Camptostoma obsoletum* | C (0.159) |  |  |  | O PC ME |  |  |  |  |
| *Elaenia flavogaster* | U (0.020) |  |  |  | X | S |  |  | UFPE 5396 |
| *Elaenia spectabilis* | C (0.094) |  |  | NA | X | S |  |  | UFPE 5979 |
| *Elaenia chilensis* | C (0.132) |  |  | NA | O PC ME |  |  |  |  |
| *Elaenia cristata* | C (0.054) |  |  |  | O PC ME | P | ML309643051 |  |  |
| *Myiopagis viridicata* | C (0.077) |  |  | NA | X | R S |  | ML309437201 | UFPE 5341, 5405 |
| *Phaeomyias murina* | A (0.457) |  |  | NA | X | R S |  | ML308549511 | UFPE 4951, 4970, 5001, 5324, 5329 |
| *Phyllomyias fasciatus* | U (0.030) |  |  |  | O PC ME | R |  | ML309425291 |  |
| *Serpophaga subcristata* | R (0.003) |  |  |  | O PC |  |  |  |  |
| *Myiarchus swainsoni* | U (0.010) |  |  | NA | O PC ME |  |  |  |  |
| *Myiarchus ferox* | R |  |  |  | O MN | S |  |  | UFPE 5339 |
| *Myiarchus tyrannulus* | R (0.006) |  |  |  | O PC |  |  |  |  |
| *Casiornis fuscus* | U (0.016) | NE |  | LM | X | S |  |  | UFPE 4946 |
| *Pitangus sulphuratus* | R |  |  | NA | O |  |  |  |  |
| *Myiodynastes maculatus* | R (0.006) |  |  | NA | PC ME |  |  |  |  |
| *Megarynchus pitangua* | U (0.016) |  |  |  | O PC ME | R |  | ML308819401 |  |
| *Myiozetetes similis* | R (0.006) |  |  |  | O PC ME |  |  |  |  |
| *Tyrannus melancholicus* | A (0.240) |  |  | NA | O PC ME | P R | ML309682931 | ML309439801 |  |
| *Tyrannus savana* | R |  |  | NA | O | P | WA2006422 |  |  |
| *Empidonomus varius* | C (0.071) |  |  | NA | O PC ME | R |  | ML309426891 |  |
| *Sublegatus modestus* | R (0.003) |  |  | NA | PC ME |  |  |  |  |
| *Fluvicola nengeta* | R |  |  |  | O | P | WA1617806 |  |  |
| *Myiophobus fasciatus* | C (0.098) |  |  | NA | PC ME | P | ML309734691 |  |  |
| *Cnemotriccus fuscatus* | C (0.101) |  |  |  | O PC ME | P | WA2581235 |  |  |
|  |  |  |  |  |  |  |  |  |  |
| VIREONIDAE |  |  |  |  |  |  |  |  |  |
| *Cyclarhis gujanensis* | C (0.166) |  |  |  | X | R S |  | ML308539131 | UFPE 4947, 4965 |
| *Hylophilus amaurocephalus* | A (0.247) |  |  |  | X | R S | LNN | ML309432681 | UFPE 4955, 4967, 4968 |
| *Vireo chivi* | R |  |  | NA | O |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| CORVIDAE |  |  |  |  |  |  |  |  |  |
| *Cyanocorax cyanopogon* | C (0.054) | Br |  |  | O PC ME | R |  | ML309152981 |  |
|  |  |  |  |  |  |  |  |  |  |
| HIRUNDINIDAE |  |  |  |  |  |  |  |  |  |
| *Stelgidopteryx ruficollis* | R (0.006) |  |  | NA | PC | P | ML309643111 |  |  |
|  |  |  |  |  |  |  |  |  |  |
| TROGLODYTIDAE |  |  |  |  |  |  |  |  |  |
| *Troglodytes musculus* | C (0.101) |  |  |  | O PC ME | R |  | ML309432871 |  |
| *Cantorchilus longirostris* | A (0.484) | Br |  |  | X | R S |  | ML308556591 | UFPE 4973, 4987, 5394, 5407/8 |
|  |  |  |  |  |  |  |  |  |  |
| POLIOPTIDAE |  |  |  |  |  |  |  |  |  |
| *Polioptila plumbea* | A (0.311) |  |  |  | X | P R S | ML309480091 | ML308820901 | UFPE 5338 |
|  |  |  |  |  |  |  |  |  |  |
| TURDIDAE |  |  |  |  |  |  |  |  |  |
| *Turdus leucomelas* | C (0.125) |  |  |  | X | R S |  | ML308539401 | UFPE 5326, 5395 |
| *Turdus rufiventris* | R |  |  |  | PC |  |  |  |  |
| *Turdus amaurochalinus* | R (0.006) |  |  | NA | O PC ME | P | ML309643141 |  |  |
|  |  |  |  |  |  |  |  |  |  |
| MIMIDAE |  |  |  |  |  |  |  |  |  |
| *Mimus saturninus* | R (0.003) |  |  |  | O PC |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| FRINGILIDAE |  |  |  |  |  |  |  |  |  |
| *Euphonia chlorotica* | C (0.132) |  |  |  | O PC ME | R |  | ML309468441 |  |
|  |  |  |  |  |  |  |  |  |  |
| PASSERALIDAE |  |  |  |  |  |  |  |  |  |
| *Zonotrichia capensis* | U (0.033) |  |  |  | O PC ME | P | WA2056690 |  |  |
| *Arremon taciturnus* | R (0.006) |  |  |  | O PC ME | P | WA1656190 |  |  |
|  |  |  |  |  |  |  |  |  |  |
| ICTERIDAE |  |  |  |  |  |  |  |  |  |
| *Cacicus solitarius* | R |  |  |  | O | P | WA1656217 |  |  |
| *Icterus jamacaii* | R | NE |  |  | O PC |  |  |  |  |
| *Icterus pyrrhopterus* | R (0.006) |  |  |  | O PC |  |  |  |  |
| *Molothrus bonariensis* | R (0.003) |  |  |  | PC |  |  |  |  |
| *Agelaioides fringillarius* | R | NE |  |  | O |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| PARULIDAE |  |  |  |  |  |  |  |  |  |
| *Setophaga pitiayumi* | R (0.003) |  |  |  | O PC |  |  |  |  |
| *Myiothlypis flaveola* | C (0.081) |  |  |  | X | P R S | ML309708631 | ML309129601 | UFPE 4996, 5330 |
|  |  |  |  |  |  |  |  |  |  |
| CARDINALIDAE |  |  |  |  |  |  |  |  |  |
| *Piranga flava* | R |  |  |  | O |  |  |  |  |
| *Cyanoloxia brissonii* | A (0.325) |  |  |  | X | P R S | WA2581210 | ML308816081 | UFPE 4977, 4979, 5323 |
|  |  |  |  |  |  |  |  |  |  |
| THRAUPIDAE |  |  |  |  |  |  |  |  |  |
| *Compsothraupis loricata* | R | NE |  |  | PC |  |  |  |  |
| *Dacnis cayana* | C (0.054) |  |  |  | X | P S | ML309708711 |  | UFPE 5318/9 |
| *Saltator similis* | U (0.010) |  |  |  | O PC ME | P | WA2006386 |  |  |
| *Coereba flaveola* | C (0.061) |  |  |  | X | P S | ML309694211 |  | UFPE 4969, 5002 |
| *Volatinia jacarina* | U (0.010) |  |  |  | O PC ME | P | ML309644331 |  |  |
| *Coryphospingus pileatus* | C (0.145) |  |  |  | X | P R S | WA2581215 | ML309465311 | UFPE 4948, 4952, 4991, 4999, 5320/1, 5397 |
| *Sporophila nigricollis* | R |  |  |  | O |  |  |  |  |
| *Sporophila albogularis* | R (0.003) | Caa |  |  | O PC ME |  |  |  |  |
| *Sporophila leucoptera* | R |  |  |  | ME MN | S |  |  | UFPE 5322 |
| *Thlypopsis sordida* | R (0.003) |  |  |  | O PC ME |  |  |  |  |
| *Sicalis flaveola* | O |  |  |  |  | P | WA2006413 |  |  |
| *Sicalis luteola* | R |  |  |  | O |  |  |  |  |
| *Schistochlamys ruficapillus* | A (0.305) |  |  |  | X | P R S | WA2006416 | ML308822551 | UFPE 4963/4, 4966, 5003, 5313/15 |
| *Paroaria dominicana* | R (0.006) | Caa |  |  | PC |  |  |  |  |
| *Thraupis sayaca* | R (0.003) |  |  |  | PC |  |  |  |  |
| *Stilpnia cayana* | A (0.284) |  |  |  | X | P R S | WA2006417 | ML309148211 | UFPE 4989 |

\* Species recorded in more than 20% of our 295 5-min point counts were considered abundant. Species were considered common if recorded between 5 and 20% of the surveys, and uncommon if they were recorded between 1 and 5% of them. Species were considered rare if were recorded in less than 1% of our surveys (one or two records) and/or were only recorded through opportunistic observations. Species were considered occasional if were only detected and documented by other observers (bird watchers or scientists that commonly visit the area) and not by any of our survey methods. We acknowledge that these categories are rather subjective, so we present continuous abundance values for the species registered. Because we only conducted point counts during the daytime, we do not provide abundance estimates of nocturnal birds.