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Sixty new dragonfly and damselfly species from Africa (Odonata)

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Taxonomic abstract. The following new species of Odonata are described from Africa: *Umma gumma*, *Africocypha varicolor*, *Chlorocypha aurora*, *Chlorocypha flammea*, *Chlorocypha granata*, *Chlorocypha maxima*, *Pentaphlebia mangana*, *Allocnemis vicki*, *Elattoneura aurifex*, *Elattoneura lapidaria*, *Elattoneura tarbotonorum*, *Aciagrion bapepe*, *Africallagma quingentum*, *Agriocnemis canuango*, *Agriocnemis toto*, *Ceriagrion banditum*, *Ceriagrion junceum*, *Ceriagrion obfuscans*, *Pseudagrion aureolum*, *Pseudagrion dactylidium*, *Pseudagrion munte*, *Pseudagrion pacale*, *Pseudagrion sarepi*, *Pseudagrion tanganyicum*, *Anax gladiator*, *Gynacantha congolica*, *Gynacantha pupillata*, *Lestinogomphus calcaratus*, *Lestinogomphus nefrens*, *Lestinogomphus obtusus*, *Lestinogomphus venustus*, *Notogomphus bosumbuli*, *Notogomphus cobyae*, *Notogomphus gorilla*, *Notogomphus intermedius*, *Notogomphus kimpavita*, *Onychogomphus undecim*, *Paragomphus cammaertsi*, *Paragomphus clausnitzerorum*, *Paragomphus darwalli*, *Paragomphus dispar*, *Paragomphus lemperti*, *Phyllogomphus bongorum*, *Tragogomphus grogonfla*, *Eleuthemis eogaster*, *Eleuthemis libera*, *Eleuthemis umbrina*, *Malgassophlebia andzaba*, *Neodythemis infra*, *Neodythemis katanga*, *Orthetrum agaricum*, *Orthetrum kafwi*, *Orthetrum lusinga*, *Orthetrum umbratum*, *Porpax mezierei*, *Trithemis hinnula*, *Trithemis legrandi*, *Urothemis venata*, *Zygonyx annika*, *Zygonyx denticulatus* and *Zygonyx dionyx*. The taxonomy of these genera and species-groups and complexes are also discussed: *Chlorocypha*, including the diagnosis of *C. dahli*, *C. ghesquierei* and *C. victoriae*; the *pauli*-group of *Allocnemis*; the *glauca*-group and *vrijdaghi*-complex of *Elattoneura*; the *suave*-complex of *Ceriagrion*, including the diagnosis of *C. mourae*, *C. sakejii* and *C. suave*; the *varians*-group of *Ceriagrion*, including the diagnosis and rejected synonymy of *C. platystigma* with *C. varians*; the *speratus*-group of *Anax*, including the diagnosis and rejected synonymy of *A. rutherfordi* with *A. speratus*; the *bullata*-group of *Gynacantha*, including the diagnosis and rejected synonymy of *G. victoriae* with *G. bullata*; *Lestinogomphus*, including the diagnosis of *L. matilei* and new synonymy of *L.* (formerly *Microgomphus*) *bivittatus* with *Mastigogomphus* (formerly *Neurogomphus*) *chapini*; *Notogomphus*, including the new synonymies of *N. butoloensis* with *N. leroyi*, of *N. anaci* and *N. verschuereni* with *N. spinosus*, and of *N. meruensis*

with *N. kilimandjaricus*; the *supinus*-group of *Onychogomphus*; *Paragomphus*, especially the *cognatus*-group, including the diagnoses and new synonymies of *P. bredoi* and *P. xanthus* with *P. serrulatus*, and of *P. interruptus* with *P. machadoi*, and the diagnosis of *P. maynei*; *Eleuthemis*, including the diagnosis and rejected synonymy of *E. quadrigutta* with *E. buettikoferi*; the *saegeri*-group of *Orthetrum*; the *basitincta*- and *longistyla*-groups of *Trithemis*, including the new synonymies of the genera *Anectothemis*, *Congothemis*, *Lokithemis* and *Porpacithemis* with *Trithemis*, and of *T. trithemoides* with *T. apicalis*; and the *flavicosta*-complex of *Zygonyx*.

Man knows just one fifth of the nine million species of animal, plant, fungus and protist thought to inhabit our planet. Dragonflies and damselflies are regarded as well-known, however. Nevertheless we describe 60 new species, the most to be named at once in 130 years, adding one to every twelve species known in Africa. Each species is colourful and can often be recognised even from a photograph, showing that not all unknown life is indistinct and concealed. The species' beauty and sensitivity can raise awareness for the densest and most threatened biodiversity: freshwater covers less than one percent of Earth's surface, but harbours ten percent of animal species, of which a third may be at risk of extinction. Most of them, like dragonflies, are insects. They are popular indicators of habitat value and quality, but without a name cannot be added to the IUCN Red List. As habitats are rapidly disappearing, more exploratory and descriptive research is needed, support for which has waned. Nature, natural historians and the archives of life they build together are all under threat: our 60 new species are therefore as much an act of desperation as urgency.