

## *Tetramorium snellingi* sp.n. – a new leaf-litter ant species (Hymenoptera: Formicidae) from a Western Kenyan rainforest

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### Abstract

A new myrmicine ant species is described from the Kakamega Forest, a Guineo-Congolian rainforest remnant in Western Kenya. The new species has been named *Tetramorium snellingi* sp.n. and is morphologically most similar to *T. weitz-eckeri* EMERY, 1895 and *T. guineense* (BERNARD, 1953) but can be easily distinguished from them by body size, shape of propodeal spines, cephalic ground sculpturation, and colour pattern. The description is based on worker and queen castes; the male remains unknown. *Tetramorium snellingi* sp.n. is a common leaf-litter inhabitant of the Kakamega Forest. Its distribution is limited to near-primary and secondary forest habitats and it seems to be one of the few endemic ant species described for the Kakamega Forest up to now.

**Key words:** Formicidae, *Tetramorium snellingi*, new species, Kakamega Forest, Western Kenya, leaf-litter ants.

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### Introduction

The ant genus *Tetramorium* MAYR, 1855 is nearly globally distributed and can be found in the Afrotropical, Malagasy, Palearctic, Oriental, and Indo-Australian zoogeographical regions, and with a few species, mostly not native, in the New World (BROWN 1957, BOLTON 1977, 1979, 1980). However, its main diversity can certainly be found in the Afrotropical zoogeographical region, where it is represented with 209 recognised species (BOLTON 1976, 1980, 1985). The taxonomic situation of the genus is in a much better state compared to other diverse and widely distributed genera like *Camponotus* MAYR, 1861, *Crematogaster* LUND, 1831, or *Pheidole* WESTWOOD, 1839, which are in a condition of taxonomic chaos and in great need of modern revision (ROBERTSON 2000, WARD 2007). Excellent revisions of the genus *Tetramorium* provided a good taxonomic knowledge for the Afrotropical, Malagasy, Oriental, and Indo-Australian regions (BOLTON 1976, 1977, 1979, 1980, 1985). Recent studies also improved the understanding of Palearctic *Tetramorium* (CAGNIANT 1997, SANETRA & al. 1999, CSÖSZ & MARKÓ 2004, STEINER & al. 2005, SCHLICK-STEINER & al. 2006). However, since BOLTON's (1976, 1980, 1985) revisionary studies no further works about Afrotropical *Tetramorium* have been published and several sampling projects have generated a good amount of undescribed species from different localities. In the collection of the Zoological Research Museum Koenig in Bonn alone there are 12 potentially new *Tetramorium* species from the Kakamega Forest in Western Kenya and five more from other Kenyan localities. Looking at the genus in the Kakamega Forest, we found 40 species of *Tetramorium* during several sampling surveys in different habitats from 2002 to 2009. The *Tetramorium weitz-eckeri* species group as de-

finied by BOLTON (1980) was especially well represented with eight species. From the total number of 40 species of *Tetramorium*, 28 could be identified at the species level while 12 could not be matched with any valid species. This work describes the first new species of *Tetramorium* resulting from our studies in Kenya.

### Material and methods

#### Depositories:

- BMNH The Natural History Museum (= British Museum of Natural History), London, UK
- CAS California Academy of Sciences, San Francisco, USA
- LACM Natural History Museum of Los Angeles County, Los Angeles, USA
- MHNG Muséum d'Histoire Naturelle de Genève, Switzerland
- NMK National Museums of Kenya, Nairobi, Kenya
- ZFMK Zoological Research Museum Koenig, Bonn, Germany

**Measurements and indices:** Specimens were measured with an Olympus SZX 12 stereomicroscope equipped with a dual-axis optical micrometer at a magnification of 90×. The following measurements and indices, in parts adapted from BOLTON (1980), SEIFERT (2003), and GÜSTEN & al. (2006), were used:

- CI Cephalic Index: HW / HL × 100.
- EL Eye Length: maximum diameter of compound eye measured in oblique lateral view.
- HL Head Length, excluding mandibles: maximum length from mid-point of anterior clypeal margin to mid-point of posterior margin of head, measured in full-

face view taking care that the head is carefully tilted to the position with the true maximum. Excavations on occipital and anterior clypeal margin reduce HL.

- HW Head Width: maximum width of head directly behind eyes measured in full-face view.
- PPH Postpetiole Height: maximum height of postpetiolar node measured in lateral view from highest (median) point of node to ventral outline.
- PPL Postpetiole Length: maximum length of postpetiolar node measured in dorsal view.
- PPW Postpetiole Width: maximum width of postpetiole measured in dorsal view.
- PTH Petiole Height: maximum height of petiolar node measured in lateral view from highest (median) point of node to ventral outline. The measuring line is placed in an orthogonal angle to the ventral outline of the node.
- PTL Petiole Length: maximum length of petiole from anterior notch close to propodeum to articulation with postpetiole measured in dorsal view. Both points must be in focus.
- PTW Petiole Width: maximum width of petiole measured in dorsal view.
- PW Pronotal Width: maximum width of pronotum measured in dorsal view.
- SI Scape Index:  $SL / HW \times 100$ .
- SL Scape Length: maximum straight-line scape length excluding basal condyle and neck measured in oblique frontal view.
- WL Weber's Length: diagonal length of mesosoma in lateral view from most posterior corner of propodeal lobe to farthest point on anterior face of pronotum, excluding the neck.

The resulting measurements and indices are provided as arithmetic mean  $\pm$  standard deviation with minimum and maximum values in parentheses, except for the holotype worker and the two paratype queens. All measurements are expressed in millimetres and presented with three decimal places.

**Specimen imaging:** The holotype worker and a paratype queen were imaged using a LEICA Z6 APO stereomicroscope in combination with Syncroscopy Auto-Montage software (version 5.03) and the mounted figures were processed with Adobe Photoshop CS2.

**Material examined:** This work is based on material from more than 1800 pitfall traps and over 110 Winkler bags collected in the Kakamega Forest, Western Kenya, during several field surveys for leaf-litter and ground-dwelling ants from 2002 to 2009 and processed in the ZFMK.

#### *Tetramorium snellingi* sp.n. (Figs. 1 - 6)

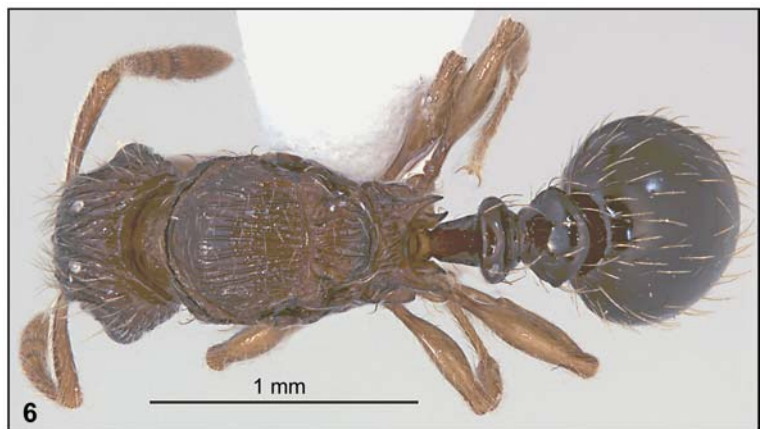
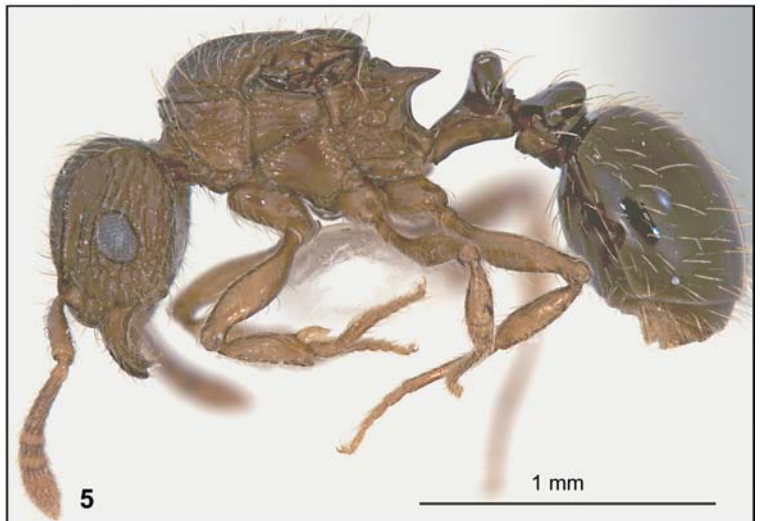
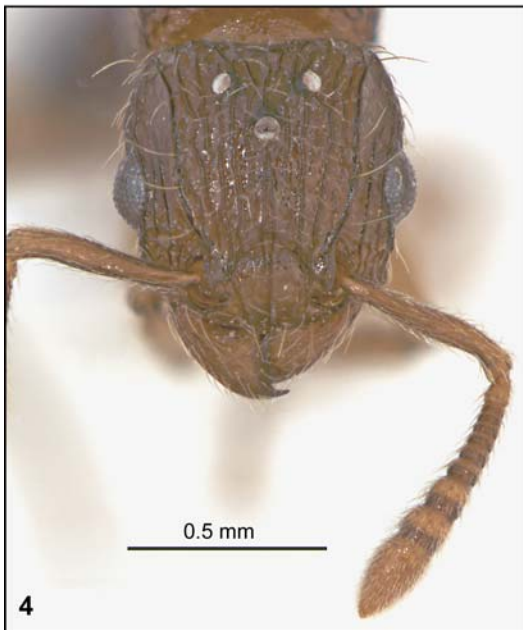
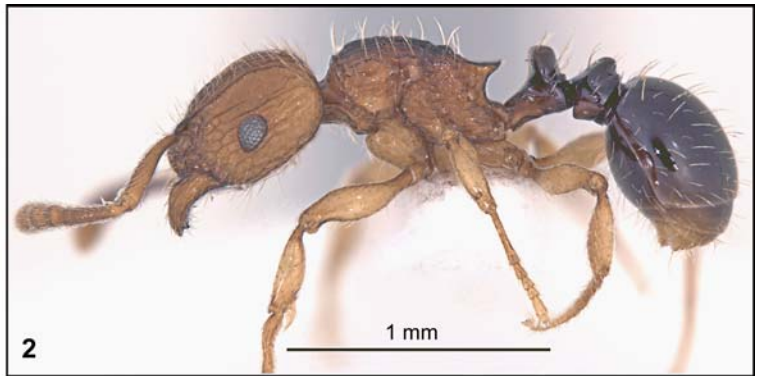
**Type material: Holotype worker.** Kenya: Western Province, Kakamega, Kakamega Forest, Salazar, 00° 19' 36" N, 34° 52' 14.6" E, 1650 m a.s.l., Kakamega survey 2007, Transect 21, 16.VIII.2008, leaf-litter, pitfall trap, leg. F. Hita Garcia (NMK: collection code ZFMK HYM 2009 / 3105).

**Paratypes.** 35 workers and 2 queens from the following localities of the Kakamega Forest: Bunyala: 00° 22' 43.7" N, 34° 41' 57.3" E, 1600 m a.s.l., Kakamega survey 2008, Transect 35, VIII.2008, leg. G. Fischer (ZFMK: 2 queens, collection codes HYM 2009 / 3103, 3104); Buyangu: 00° 20' 53.6" N, 34° 51' 54.1" E, 1650 m a.s.l., Kakamega survey 2007, Transect 25, 6.IX.2009, leg. F. Hita Garcia (ZFMK:

3 workers, collection codes HYM 2009 / 3095 - 3097); Colobus: 00° 21' 18.5" N, 34° 51' 30.1" E, 1650 m a.s.l., Kakamega survey 2007, Transect 1, 14.VI.2007, leg. M. Peters (CAS: 3 workers); Isecheno B: 00° 14' 52.3" N, 34° 52' 5.3" E, 1600 m a.s.l., Kakamega survey 2007, Transect 18, 14.VIII.2007, leg. F. Hita Garcia (ZFMK: 1 worker, collection code HYM 2009 / 3099); Malava East: 00° 27' 10.6" N, 34° 51' 48.7" E, 1650 m a.s.l., Kakamega survey 2007, Transect 4, 19.VI.2007, leg. G. Fischer (CAS: 1 worker; MHNG: 1 worker); Malava West: 00° 27' 0.9" N, 34° 50' 52.9" E, 1650 m a.s.l., Kakamega survey 2007, Transect 8, 3.VII.2007, leg. G. Fischer (ZFMK: 1 worker, collection code HYM 2009 / 3098); Mwanzu: 00° 14' 15.5" N, 34° 52' 03.2" E, 1650 m a.s.l., Kakamega survey 2007, Transect 16, 2.VIII.2007, leg. F. Hita Garcia (LACM: 3 workers); Salazar: 00° 19' 36" N, 34° 52' 14.6" E, 1650 m a.s.l., Kakamega survey 2007, Transect 6, 21.VI.2007, leg. M. Peters (BMNH: 4 workers; MHNG: 2 workers; NMK: 4 workers; ZFMK: 4 workers, collection codes HYM 2009 / 3100 - 3103); Salazar: 00° 19' 36.95" N, 34° 52' 16.33" E, 1650 m a.s.l., Kakamega survey 2007, Transect 21, 17.VIII.2007, 1650 m a.s.l., leg. F. Hita Garcia (ZFMK: 6 workers, collection codes HYM 2009 / 3089 - 3094); Udo's camp - secondary forest: 00° 21' 7.9" N, 34° 52' 2.6" E, 1650 m a.s.l., Kakamega survey 2007, Transect 7, 2.VII.2007, leg. G. Fischer (LACM: 1 worker; MHNG: 1 worker).

**Non-type material examined:** Additionally, 59 specimens from the following localities of the Kakamega Forest were examined: Buyangu: 00° 20' 54.1" N, 34° 51' 49.3" E, 1650 m a.s.l., Kakamega survey 2002, Transect 1, 27.VI.2002, leg. M. Peters (ZFMK: 5 workers); Buyangu: 00° 20' 45" N, 34° 51' 51.8" E, 1650 m a.s.l., Kakamega survey 2002, Transect 3, 27.VI.2002, leg. M. Peters (ZFMK: 4 workers); Buyangu: 00° 20' 53.6" N, 34° 51' 54.1" E, 1650 m a.s.l., Kakamega survey 2007, Transect 25, 6.IX.2009, leg. F. Hita Garcia (ZFMK: 1 worker); Colobus: 00° 21' 18.5" N, 34° 51' 30.1" E, 1650 m a.s.l., Kakamega survey 2007, Transect 1, 14.VI.2007, leg. M. Peters (ZFMK: 2 workers); Isecheno A: 00° 14' 57.7" N, 34° 52' 04.8" E, 1600 m a.s.l., Kakamega survey 2002, Transect 3, 21.VIII.2002, leg. M. Peters (ZFMK: 1 worker); Isecheno A: 00° 14' 57.7" N, 34° 52' 04.8" E, 1600 m a.s.l., Kakamega survey 2007, Transect 17, 3.VIII.2007, leg. F. Hita Garcia (ZFMK: 3 workers); Kaimosi: 00° 07' 40.8" N, 34° 50' 24" E, 1600 m a.s.l., Kakamega survey 2008, Transect 30, VIII.2008, leg. G. Fischer (ZFMK: 1 worker); Kisere: 00° 23' 6.2" N, 34° 53' 37.8" E, 1650 m a.s.l., Kakamega survey 2002, Transect 11, 1.VII.2002, leg. M. Peters (ZFMK: 1 worker); Malava East: 00° 27' 10.6" N, 34° 51' 48.7" E, 1650 m a.s.l., Kakamega survey 2007, Transect 4, 19.VI.2007, leg. G. Fischer (ZFMK: 2 workers); Mwanzu: 00° 14' 15.5" N, 34° 52' 03.2" E, 1650 m a.s.l., Kakamega survey 2007, Transect 16, 2.VIII.2007, leg. F. Hita Garcia (ZFMK: 5 workers); Salazar: 00° 19' 36" N, 34° 52' 14.6" E, 1650 m a.s.l., Kakamega survey 2007, Transect 6, 21.VI.2007, 1650 m a.s.l., leg. M. Peters (ZFMK: 11 workers); Salazar: 00° 19' 36.95" N, 34° 52' 16.33" E, 1650 m a.s.l., Kakamega survey 2007, Transect 21, 17.VIII.2007, 1650 m a.s.l., leg. F. Hita Garcia (ZFMK: 12 workers); Udo's camp - secondary forest: 00° 21' 7.9" N, 34° 52' 2.6" E, 1650 m a.s.l., Kakamega survey 2007, Transect 7, 2.VII.2007, leg. G. Fischer (ZFMK: 11 workers).

**Diagnosis:** The following combination of characters separates *Tetramorium snellingi* from all other Afrotropical



Figs. 1 - 6: *Tetramorium snellingi* sp.n. (1 - 3) Holotype worker (ZFMK HYM 2009 / 3105). (1) Head in full-face view; (2) body in profile; (3) body in dorsal view. (4 - 6) Paratype queen (ZFMK HYM 2009 / 3103). (4) Head in full-face view; (5) body in profile; (6) body in dorsal view.

*Tetramorium* species with 11-segmented antennae: clypeus with anterior median impression; propodeal spine of medium size, elongate-triangular with broad base and acute apex; node of petiole strongly squamiform, in dorsal view wide and thin; mandible distinctly longitudinally striate; absence of long projecting hairs on metatibia; pilosity simple; head and mesosoma orange-brown with paler, more yellowish legs, contrasting with the dark brown to blackish petiole, postpetiole and gaster.

**Description of holotype worker:** CI 92.683, EL 0.139, HL 0.651, HW 0.603, PPH 0.267, PPL 0.200, PPW 0.278, PTH 0.267, PTL 0.256, PTW 0.244, PW 0.444, SI 73.684, SL 0.444, WL 0.730.

Anterior clypeal margin with shallow, but distinct median concave impression. Frontal carinae strongly developed, becoming weaker behind level of eye and ending immediately before occipital margin. Flange surmounting frontal carina diminishes in size after level of eye. Antennal scrobe narrow, shallow, and without defined ventral margin, ending before occipital margin. Antenna 11-segmented with conspicuous 3-segmented club, scape not reaching posterior margin of head, ending at same height as scrobe. Eye of medium size, with seven ommatidia in longest row. In dorsal view, pronotum with blunt angles separating dorsum from side, which become weaker posteriorly and are absent on rest of mesosoma. Metanotal groove weakly impressed. Propodeal spine of medium size, elongate-triangular with broad base and acute apex. Spine approximately as long as maximum distance between bases of spines. Propodeal lobe small, triangular and acute. Node of petiole strongly squamiform, in dorsal view much wider than long and in profile much higher than long. Postpetiole in dorsal view only slightly wider than long and much more voluminous than petiole. In lateral view, postpetiole less squamiform and thicker compared to petiole and only slightly antero-posteriorly compressed. Sting appendage spatulate. Mandible distinctly longitudinally striate. Dorsal area with 9 widely spaced longitudinal rugae between frontal carinae, almost all running unbroken to posterior margin of head. Spaces between rugae with very weak, nearly effaced ground sculpture or completely unsculptured, generally appearing quite shiny. Lateral part of head ventral to scrobe likewise longitudinally rugose with rugae widely spaced. Scrobal area with reduced punctate ground sculpture or unsculptured. Dorsum of mesosoma with coarse longitudinal rugae. Spaces between them and propodeal declivity unsculptured, smooth and shiny. Petiole, postpetiole and gaster completely unsculptured, smooth and shiny. All dorsal surfaces of head, mesosoma, petiole, postpetiole, and gaster with abundant, long, fine, and simple suberect to erect hairs. Fine pubescence on tibiae appressed, on antennal scape appressed to decumbent; neither with standing hairs. Head and mesosoma orange-brown with paler, more yellowish legs, contrasting with dark brown to blackish petiole, postpetiole and gaster.

**Description of paratype workers:** CI 92.936 ± 0.698 (92.683, 95.122), EL 0.142 ± 0.006 (0.133, 0.150), HL 0.654 ± 0.006 (0.651, 0.667), HW 0.608 ± 0.007 (0.603, 0.619), PPH 0.263 ± 0.007 (0.256, 0.278), PPL 0.208 ± 0.010 (0.200, 0.222), PPW 0.282 ± 0.005 (0.278, 0.289), PTH 0.263 ± 0.005 (0.256, 0.267), PTL 0.257 ± 0.007 (0.244, 0.267), PTW 0.239 ± 0.008 (0.222, 0.250), PW 0.447 ± 0.007 (0.433, 0.456), SI 71.829 ± 1.462 (70.000,

73.684), SL 0.436 ± 0.010 (0.422, 0.444), WL 0.717 ± 0.013 (0.698, 0.730) (20 measured).

Generally like holotype worker in all aspects, intraspecific variation modest to negligible. Slight variation in number of rugae between frontal carinae, usually nine but in one individual only eight. Propodeal spine varies faintly in shape, some more triangular than others, but variation minute. Overall, general dimensions, pilosity, sculpturation as well as colour pattern consistent throughout all examined specimens. No observed variation between specimens from main forest and forest fragments or between near-primary and secondary forest habitats.

**Description of queens:** CI 95.562 - 95.745, EL 0.200 - 0.206, HL 0.730 - 0.746, HW 0.698 - 0.714, PPH 0.333 - 0.344, PPL 0.278, PPW 0.378 - 0.389, PTH 0.333 - 0.344, PTL 0.344 - 0.356, PTW 0.333, PW 0.635, SI 71.591 - 73.111, SL 0.500 - 0.522, WL 0.960 - 1.060 (2 measured).

Generally, queen caste resembles most morphological character states and colour pattern of worker caste. Only differences on head of queen: presence of ocelli on dorsum, eye much larger with more than ten ommatidia in longest row, and slightly larger number of rugae between frontal carinae, nine to ten. Sculpturation on mesosoma differs slightly from worker caste, dorsal longitudinal rugae very much comparable to worker caste but lateral part of mesosoma much more unsculptured in queen caste. Apart from this, mesosoma of typical queen shape with small pronotum, expanded mesonotum and distinct scutellum.

**Male:** unknown.

**Comparative notes:** Taking into consideration the combination of characters of 11-segmented antenna, spatulate sting appendage, longitudinally striate mandible, squamiform petiole, absence of long projecting hairs on metatibia, unsculptured petiole and postpetiole and strongly developed frontal carinae one comes to the conclusion that *Tetramorium snellingi* is clearly a member of the *Tetramorium weitzckeri* species group as defined by BOLTON (1980).

Within the species group, *T. snellingi* belongs to the species complex characterized by longitudinally striate mandible, no defined ventral margins of the antennal scrobe, strong sculpturation of head and mesosoma and a squamiform condition of the petiole. *Tetramorium snellingi* is clearly separable from the other four species of this species complex, i.e., *T. weitzckeri* EMERY, 1895, *T. guineense* (BERNARD, 1953), *T. humbloti* FOREL, 1891, and *T. sepultum* BOLTON, 1980. In *T. humbloti* and *T. sepultum*, the gastral pilosity is absent, while it is present in the other three species. *Tetramorium snellingi* is morphologically most similar to *T. weitzckeri* and *T. guineense* but can easily be distinguished from both by size, shape and length of propodeal spine, colour pattern and preferred habitat.

*Tetramorium snellingi* is significantly smaller in size than *T. guineense*. The following dimensions show the variation in *T. guineense*: HL 0.70 - 0.92, HW 0.66 - 0.88, SL 0.54 - 0.72, PW 0.48 - 0.64, WL 0.80 - 1.10 (BOLTON 1980). Although intraspecific variability seems to be high in *T. guineense*, there is no overlap between these dimensions and the presented measurements of *T. snellingi*. *Tetramorium weitzckeri* seems to be an even more variable species as can be seen in the following size ranges: HL 0.62 - 0.98, HW 0.60 - 0.96, SL 0.44 - 0.76, PW 0.44 - 0.70, WL 0.72 - 1.20 (BOLTON 1980). However, the dimensions

of *T. snellingi* are either at the lower end of this range or distinctly smaller. Also the ground sculpturation on the head of *T. snellingi* differs strongly from the distinct and dense punctate sculpture in *T. guineense* while it is similar to the one of *T. weitzckeri*. Furthermore, the propodeal spine of *T. snellingi* separates it clearly from the other two species, in that it is of medium size, triangular with a very broad base, and acute, while the spines of *T. weitzckeri* and *T. guineense* are spinose, long and acute. Additionally, *T. guineense* and *T. weitzckeri* both show a uniformly brown to very dark brown colouration while in *T. snellingi* the head and mesosoma are conspicuously orange-brown and the petiole, postpetiole and gaster coloured dark brown to black.

Finally, *Tetramorium snellingi* lives in another habitat compared to *T. weitzckeri*, in that the latter prefers more open savannah or grassland habitats while *Tetramorium snellingi* is a strict forest species. In contrast to *T. weitzckeri*, *T. guineense* lives in the same habitat as *T. snellingi*, in that both are leaf-litter inhabiting forest ant species. Nonetheless, both *T. weitzckeri* and *T. guineense* can be separated by the morphological features presented above and they are exclusive in terms of biogeography, too. *Tetramorium guineense* is known to occur in Western Africa and the Congo Basin whereas *T. snellingi* seems to be restricted to Western Kenya.

Generally, queen and worker caste in Afrotropical *Tetramorium* are morphologically very similar apart from the modifications of the queen. The queens of *T. snellingi* and *T. weitzckeri* can be separated from each other by using the character combination described for the worker caste. The queen caste of *T. guineense* remains as yet undescribed.

**Derivatio nominis:** The species is dedicated to Roy R. Snelling in honour of the significant work he accomplished in the taxonomy and systematics of ants and other hymenoptera over several decades and also for his personal help and advice.

**Remarks:** The new species is known only from the Kakamega Forest, Kenya, where it commonly occurs in the main forest (8245 ha) and in all smaller forest fragments (65 - 1370 ha). The main forest itself, all the forest fragments, the agricultural area around the forest, as well as open habitats within the forest, have been systematically sampled using a wide range of collecting methods over the last decade (F. Hita Garcia, unpubl.). However, *Tetramorium snellingi* was observed to occur only in near-primary and in secondary forest habitats but was never found in open habitats like glades, hills, roads, or in the agricultural landscape outside the forest. In addition, it was collected solely from the leaf-litter stratum and never found in the canopy, the lower vegetation or underground. Therefore it seems appropriate to consider *T. snellingi* as a typical faunal element of the leaf-litter ant community of the Kakamega Forest. Taking this into account, *T. snellingi* seems to be one of the few endemic ant species described for the Kakamega Forest up to now. The forest itself is often regarded as the eastern-most relict of the former Guineo-Congolian rainforest belt, which is reflected in its fauna and flora (ZIMMERMAN 1972, KOKWARO 1988, WAGNER & al. 2008). Considering this background it might be possible that *Tetramorium snellingi* also occurs in the more western rainforests of Uganda, the Central African Republic or the Democratic Republic of Congo. However, this is spe-

culative given that the faunal knowledge of most Central African rainforests is scarce and *T. snellingi* has never been reported from any other locality.

The Kakamega Forest has suffered a turbulent history of habitat degradation and fragmentation in the past which led to its protection by different Kenyan organisations (KOKWARO 1988, BROOKS & al. 1999). Nonetheless, the protection is far from complete (BLEHER & al. 2006) and the conservation status might change in the future. The evident restriction of *Tetramorium snellingi* to the leaf-litter stratum of rainforest habitats and its endemism make it vulnerable to forest destruction. On the other hand, this vulnerability to forest modification, in combination with the relatively high abundance for a tropical *Tetramorium*, provides the possibility to test the new species as a bioindicator of forest disturbance. First unpublished results seem to show a decline in the abundance of *T. snellingi* in correlation with higher rates of selective logging. It is too early to define the true bioindicator value of *Tetramorium snellingi* but additional ecological research in the Kakamega Forest might support our preliminary observations.

Unfortunately, the nesting behaviour of *Tetramorium snellingi* remains unknown, since no nest has been found yet. Nevertheless, it is assumed that it nests in the leaf-litter stratum because it was always sampled from there and the two only available queens were extracted together with some workers from a Winkler sample. Also the trophic biology of the new species remains unknown in great parts, although first unpublished data from stable isotope analysis indicate that *Tetramorium snellingi* is a predatory ant species (G. Fischer, unpubl.). Ongoing research in the ZFMK might reveal its real trophic position in the local ant community.

In terms of the taxonomic situation of *Tetramorium* in Kenya this work only is an initial step. In the ZFMK, further taxonomic including genetic analysis of Kenyan *Tetramorium* is in progress and will hopefully lead to a better understanding of the genus in Kenya and East Africa. Additional descriptive and diagnostic works, in combination with the outstanding revisions of BOLTON (1976, 1980, 1985), will provide an updated and sophisticated taxonomic foundation of the genus for future ant taxonomists and ecologists.

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## Zusammenfassung

Eine neue Ameisenart wird aus dem Kakamega Forest beschrieben, einem Guineo-Kongolischen Regenwaldrelikt im Westen Kenias. Die neue Art wird *Tetramorium snellingi* sp.n. genannt und steht morphologisch *Tetramorium weitz-eckeri* EMERY, 1895 und *Tetramorium guineense* (BERNARD, 1953) am nächsten, kann aber leicht von diesen unterschieden werden. Diese Unterscheidung beruht auf Körpergröße, Form der Propodealdornen, Skulptur am Kopf sowie dem Farbmuster. Die Artbeschreibung basiert auf der Arbeiterinnen- und Königinnen-Kaste, wohingegen das Männchen nicht bekannt ist. *Tetramorium snellingi* ist ein typischer Laubstreubewohner und kommt ausschließlich in primärwaldnahen oder sekundären Habitaten des Kakamega Forest vor. Somit scheint *T. snellingi* eine der wenigen endemischen Ameisenarten zu sein, die bisher aus dem Kakamega Forest beschrieben worden sind.

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