

lack of tibial peg-like setae, 4-segmented antennal club, and angulate, triangular, anteroventral petiolar process.

In the subsequent years after the description of *S. minima*, the fragment of cocoa plantation from where the species was uniquely known was gradually destroyed, until total elimination. As no other collection record of *S. minima* was so far made, in spite of the intense collecting effort in the region, Brazilian environmental institutions decided to consider the species as extinct (MMA 2007). In fact, as far as we know, *S. minima* was the first ant species considered extinct by human activity in the world. After that, this case has been amply divulged as an example of man-produced extinction in different popular and scientific publications.

On February 2nd, 2007, two of us (FAS and RRCS) collected 11 workers of *S. minima* in a semideciduous forest fragment of the Universidade Federal de Viçosa campus (20°45'46.3"S, 42°51'45.1"W), Viçosa, state of Minas Gerais, southeastern Brazil, over 1.000 km from *S. minima* type locality. This fragment was devastated by fire about nine years ago and presently is in the initial stage of regeneration, predominantly covered by herbaceous vegetation and sparse shrubs and trees (Martins *et al.* 2002).

The specimens were collected at 20 cm deep with subterranean pitfall traps. The traps consist of a plastic recipient (diameter = 8 cm; height = 12 cm) with an inner smaller recipient in its interior. The space between the two recipients was filled with a solution of water, detergent and salt. Two small plastic pots (empty tubes of photographic film, 3.3 cm diameter; 5.0 cm height) were placed in the inner recipient and partially filled with baits (sardine and honey, separately). Traps were then closed with plastic lids and buried. Four radial holes (1 cm diameter) in the lateral of recipients allowed the hypogaean ants to access the interior of the traps.

The workers recently collected in Minas Gerais increased the number of known *S. minima* specimens in museums from four to 15, deposited at the following institutions: Museu de Zoologia da Universidade de São Paulo, São Paulo, Brazil (six workers, including the holotype and one paratype); Laboratório de Ecologia de Comunidades, Universidade Federal de Viçosa, Minas Gerais, Brazil (six workers); Laboratório de Mirmecologia, Centro de Pesquisas do Cacau, Bahia, Brazil (one paratype worker, one Viçosa worker); Museum of Comparative Zoology, Harvard University, Cambridge, USA (one paratype worker).

One Viçosa worker, previously cleaned in acetone, was prepared for scanning electron microscope examination. The specimen was critical-point dried in a Balzer (Bal-Tec® CPD 030), and sputtered over with gold (Bal-Tec® SCD 050). After that, the specimen was mounted on the tip of a metallic triangle using silver glue and then fixated on a stub for the electron microscopy. Finally, the images were edited (Adobe PhotoShop® CS) to enhance brightness and contrast.

We compared the Viçosa specimens with the holotype and paratype workers deposited in the Museu de Zoologia, and were not able to find any significant difference. As in the original publication only drawings were provided, we present hereby SEM pictures of a *Simopelta minima* Viçosa worker,

including frontal head view, detail of the clypeus and mandibles (showing the produced clypeal tooth) and the habitus in side and dorsal views. The only point we should comment is that in the original figures (Brandão 1989: Fig. 1) the head and frontal carinae shapes do not correspond exactly to the reality, although in the morphological account these characters are correctly described.

Incidentally, the first colleagues that tried to apply a name to this *Simopelta* sample, came across the name *S. minima*, but dismissed this possibility, because they found also the information the species was extinct.

Longino (2005) pictured and described a lone worker found in a mini Winkler sample taken in the forest between La Selva Biological Station's back boundary and Magsasay, at 150 m elevation. From his pictures, we believe this specimen belongs to a hitherto undescribed *Simopelta* species. This could also be the case of the specimens cited in the Colombian Biodiversity Inventory as *Simopelta cf. minima* (Sharkey 2006).

Rarity and conservation status of ant species: fact or artifact? Rarity, in its several meanings, has been dealt with by many authors (e. g. Rabinowitz *et al.* 1986; Kunin & Gaston 1997; Murray & Lepschi 2004). The main biological properties usually associated with rareness are: (1) small population size, (2) geographically restricted, localized populations, and (3) habitat specificity. Non-biological criteria are sometimes used, as the absence of collection for a long time, discovery outside the normal geographical range, or excessive difficulty in finding a species by an expert in a single season (Rabinowitz 1981). These criteria, summed to the anthropic pressure on world's environments, are also employed to determine the species conservation status (Gärdenfors 2001; IUCN 2001). In this case, political and conservationist interests can converge in the rare and/or threatened species issue.

The rediscovery of the supposedly extinct *Simopelta minima* calls attention to the inaccuracy of various generalized criteria usually employed to determine rarity and conservation status in ant species. Very little or virtually nothing is known about the life-cycles, conditions of populations in the wild, or reproductive biology of several ant species considered rare. In addition, the lack of complete inventories in most biomes suggests that locally rare species can be fairly common because particular sites where their environmental niche requirements are best met favor high abundance. A further complication in considering taxa extinct or under severe threat without firm support may be the impairment of the development of adequate sampling techniques.

Obviously, there remains a set of rare species for which there is no current explanation for their true scarcity. A portion of the resident ant community may not be easily collected by any of the commonly used methods and techniques. For example, many myrmecologists have speculated that the subterranean ant fauna may be more abundant and diverse than generally thought (e. g. Belshaw & Bolton 1994; Longino *et al.* 2002; Underwood & Fisher 2006; Wilkie *et al.* 2007).

Biodiversity studies (Fowler & Delabie 1995; Fowler *et al.*