

19th European Carabidologists' Meeting

CONFERENCE DINNER SPEECH

A (LIGHT-HEARTED) CLASSIFICATION OF CARABIDOLOGISTS

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Dear Colleagues

I am going to read a few notes on the typology of carabidologists that I wrote with the intention to introduce some light-hearted laughter to this splendid event. While the following notes may at times seem candid, they do not want to placate anybody and are written in good-humoured jest. I very much hope that no one will be hurt or will feel insulted by it. I hope you can smile on some of the comments and not harbour any umbrage if you felt slighted or mistreated which is not my intention, and I apologise to anyone, in advance, who might feel not sufficiently flattered. I seriously hope there will be no one. With this caveat, allow me to present the *Typologia Carabidologorum*.

TYOLOGIA CARABIDOLOGORUM

Family Carabidicidae

Family Carabidicidae (meaning “carabid killers” – the curious thing is that members of the family confess an irresistible attraction and fondness towards the beetle family Carabidae – and the most common expression of this fondness is killing tens of thousands of them)

A unique family of higher vertebrates. Their most obvious distinguishing feature is that they gain their livelihood from exploiting individuals of the species-rich family of ground beetles, Carabidae. Therefore, this vertebrate family must be characterised as parasitic. In earlier times, this relationship almost inevitably resulted in the death of the host individuals, and the para-

sites were even able to draw sufficient resources from this relationship to reproduce. This virulent form of parasitism is thought to be an evolutionarily old trait in this family. Subsequent evolution resulted in diversification, and the parasitic relationship decreased in vigour. Today, the relationship does not necessarily result in the death of the host individuals. A definite trend appeared, however, that a higher number of host individuals are involved in this milder form of parasitism. At the same time, the parasite seems to have lost some of its virulence, and today is not always able to reproduce using the resources drawn from this parasitism alone. Thus, part-time parasitism and life-stage specific parasitism have also appeared, and may even be the dominant form today. The species of the family live in close association with the Earth's dominant vertebrate, *Homo sapiens*, and some individuals remarkably closely resemble individuals of this species. More often, especially in the field, however, observing the behaviour would make the carabidicid individuals easily distinguishable from normal humans. Some differences start to become noticeable already at the time of moulting into field camouflage, and any lingering doubts disappear after observing the field behaviour for a few minutes when the behavioural differences become obvious.

Most of the existing carabidicid species are known, although a formal description, to our knowledge, has not been attempted before. It may therefore be of use to document aspects of bionomics, the behaviour of some of the most numerous species, or those with the most peculiar habits.

Carabidologicus italicus

A moderately common species that spent much of its recent history in relative (probably language-based) isolation, therefore many of the more modern habits are still rare. According to earlier reports, it used to be a prosperous and widespread species during its earlier evolutionary phase. Numbers and bionomics have started to change only recently. This may be related to a recent increased exchange of goods, services and people and these trends make the species relatively less isolated today than in earlier years. However, the species still demonstrates a predilection of the ancient, more vigorous forms of parasitism that is usually fatal to the host. Its ways of dealing with the hosts conquered also seem taxonomically inclined, esp. influenced by descriptive traditions of the ways of *C. germanicus*. However, the species is currently undergoing rapid change; and it remains to be seen if the more modern but less efficient ways of parasitism will eventually dominate in this peninsular species. Females are rare, although individuals of very fine appearance have been observed.

C. polonicus

A well-recognised, abundant species of long history, today is known for its enthusiastic gregariousness and high levels of activity. The species demonstrates a definite preference for field conditions (rather than laboratory ones) and is especially fond of forests. Its activity overwhelmingly results in the death of their host. The males show a strong attraction to various fermented fluids (except possibly vinegar) and where such can be found, were observed to engage in lekking behaviour, displaying to each other and their surroundings. Some dominant males have attempted to extend their activity to the political field but with mixed success. Females are scarce or active at different times than males.

C. germanicus

A very prominent European species. Its numerical dominance and effect on conspecifics has been very noticeable in earlier times. While retaining a strong streak of traditional forms of parasitism causing the death of the host beetles, often by the use of strong chemicals, interesting and novel mutations have also appeared. Some utilise a so far unknown level of technical sophistication in exploring the host species; others are less willing to change their traditional habits, and are trying to spatially extend their activities. The success of this shift greatly depends on the use of other resources, but its future is doubtful as it merely involves a spatial change, not a behavioural one. It is too early to say yet if the novel mutations manage to develop healthy populations. A species with extremely skewed sex ratio in favour of males.

C. niederlandicus

Used to be one of the most successful species of the family, but in more recent times subsided to the new phenomena of life-stage specific parasitism and a lack of drawing sufficient resources to make a living from this parasitism only. As a consequence, the reproduction rate is low, and numbers are further diminished by changing life history after the early postdoctoral stage. Known for its convoluted ways of documenting the exploitation of its host. Sex ratio is rather male-biased, with strong, long-term adherence to its traditional ways of host exploitation.

C. flamando-vallonicus

Subsp. *lebrunei* has, in earlier times, favoured a quick and somewhat unsophisticated way of harvesting its host individuals, paired with a predilection of employing sophisticated numerical techniques using computer programmes. The utility and efficiency of this type of exploiting hosts have been hotly debated, and signs of competition and disagreement in this respect with its close neighbour, *C. niederlandicus* have been documented. Temporary parasitism is rife, and several individuals are known to seasonally migrate to tropical regions or make short-distance, permanent shifts in habitat. It is flexible in resource use as befits a species with an uncertain and narrow resource base.

C. hispaniolensis

A species noted for its scarcity, but the presence of females suggests that proliferation in the near future of this species can be expected. The few known specimens specialise in particular ways of host exploitation, for example, carotyping; it is expected that this, too, will widen soon. A gregarious species, seeking the company of its congenics.

C. septentrionalis

A taciturn but prominent European species of the family, with well-defined subspecies structure. Some classifications may put these subspecies into separate species, distinguishing, for example, the subspecies *fennicus*, *norvegicus* and *jyllandicus*, but this author decided to lump them as many of their ways of resource use shows common features and regional collaboration. Its constant, unbroken presence in its habitats is noticeable. It labours steadily, if sometimes in a bit of self-imposed isolation, not much taking into account the habits of conspecifics. However, the efficiency of resource use is remarkable, and part-time or life-stage specific parasitism is relatively rare. *C. septentrionalis* is one species where the sex ratio is less male-biased; in the sub-species *C. s. jyllandicus*, as well as in *C. s. fennicus*, nearly equal numbers of female and male individuals have been active.

C. pannonicus

A species with a very chequered but imperfectly known history, inhabiting the Carpathian Basin. Subfossil individuals have not been found – in historic times, the area was apparently totally occupied by *C. germanicus*. Emerging as a separate species during the transition of the 19–20th century, it survived

at very low densities. Sporadic bursts of activity have been observed, but this has not been sustained. Re-emerged during the last quarter of the 20th century with a characteristic mixed activity type between taxonomic, biodiversity-related and applied projects, and a considerable vigour of obligate parasitism. Its tactic seems to modify the way of resource use but not the resource itself: it resolutely clings to its original host, Carabidae. Can survive extreme scarcity of research funds. Some individuals are known to migrate long-distance. Theoretically inclined, with strong mathematical pretensions. Gregarious.

C. novae-mundi (also known as *C. gringo* or *C. americanus*)

A spatially widespread if somewhat scarce species. Its presence and assumed habitat occupation seem relatively recent. All forms of resource use have been attempted, including seasonal migration to Neotropical areas, the use of resource exploitation methods more prevalent in other, often lower species, for example, geneticists, numerical taxonomists and the like, and the temporary luring of foreign congeners. The remarkable degree of flexibility sometimes prevents specialisation and the mastering of intimacies that in other species are well known. Furthermore, the low population density possibly makes the fruitful interaction with conspecifics suboptimal. This, however, is acknowledged as a crude generalisation as several exceptions must be noted. The rather skewed sex ratio of this species is a bit worrying. We venture to say that a continued, vigorous existence would greatly be enhanced by mimicking the behaviour of congeners and attempt to make the sex ratio less skewed.

C. sudamericanus

The species' biology is not well known as very few individuals have ever been observed. In some instances, individuals of *C. gringo* (= *C. americanus*) appear but they usually lack in field resistance and are unable to find a sufficient number of host individuals to settle and prosper. Their environmental tolerance is low, and they succumb easily to the rigours of the foreign habitat. The true *C. sudamericanus* can be a very rare species, as only limited traces of the species activity is apparent. Subfossil individuals have similarly been rare. A major entomological expedition is planned for the year 2020 and hopes are high that more specimens of this potentially interesting species will be seen. It seems probable that the resource base is sufficiently rich that it can support a reasonable population that can quickly specialise in the manner of their northern relatives. It remains to be seen if a migratory habit of *C. gringo* will aid the evolution of *C. sudamericanus*.

Neocarabidologicus novaeseelandiae

The species has only recently invaded the New Zealand archipelago, and sub-speciation is not advanced. The female of the species is unknown, may not even exist and at present, the population seems to survive by continued immigration. However, soon after settling, there are noticeable behavioural changes that take place, and these soon make it difficult to distinguish long-term resident individuals and newer immigrants. They are noted for boundless enthusiasm, a predilection of spending long periods in rainy outdoor conditions, featuring fancy camouflage of shorts and long socks, esp. in the field, and uttering the battle cry 'Undescribed!' on encountering about every third of their host individuals.

And this, dear Colleagues, is as far as the taxonomy of this illustrious family is currently described. Due to lack of time, further recorded species currently lack a formal description. We hope that this is only a temporary imperfection, and the knowledge of species of this curious family will advance in the near future.

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