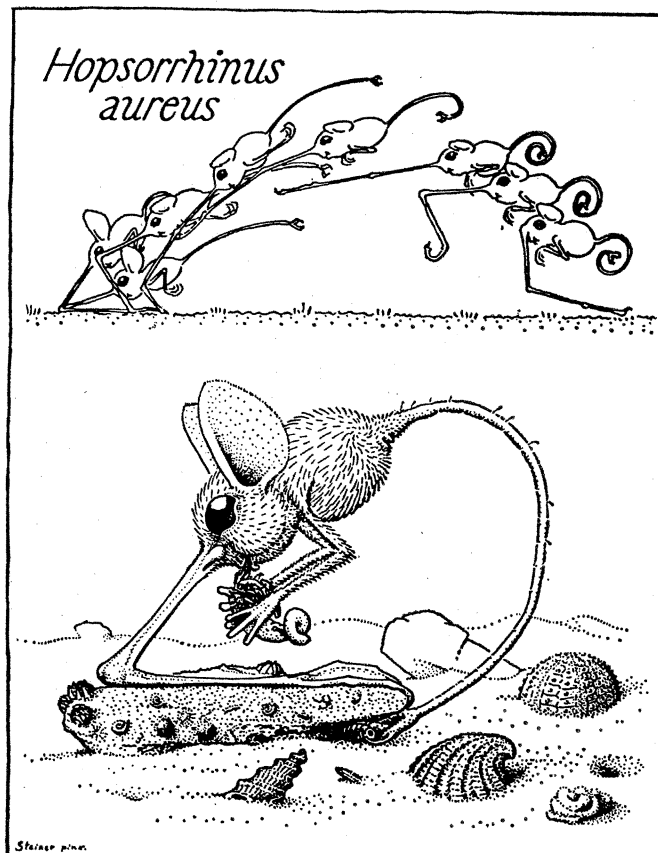
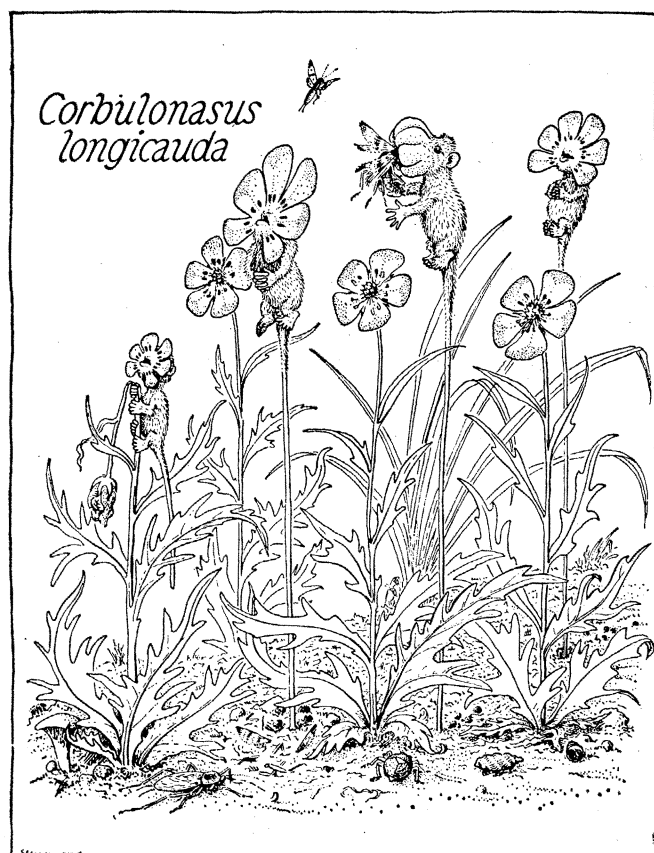


### Spoofs in Taxonomy

Exhibit A (top left), *Nasobema lyricum*; Exhibit B (top right), *Emunctator sorbens*; Exhibit C (bottom left), *Corbulonassus longicauda*; Exhibit D (bottom right), *Hopsorrhinus aureus*. [From *Anatomie et Biologie des Rhinogrades*, reviewed on the next page by G. G. Simpson. The monograph is available from Masson et Cie Editeurs, 120 Boulevard Saint Germain, Paris 6, France]



The most startling zoological event so far in the 20th century—the discovery of the Rhinogradentia, an order of mammals with no fewer than 15 families, 26 genera, and 138 species, according to Stümpke's somewhat oversplit classification—is the topic of the monograph, *Anatomie et Biologie des Rhinogrades*, by Harald Stümpke. Although the discovery was made in 1941 (or just possibly as early as 1894) and is the subject of a considerable foreign literature, it has been given surprisingly little attention by American taxonomists. That neglect can be explained in part by the fact that Stümpke's definitive monograph was published only recently and in German. The present translation into French will help somewhat, but further translation into Russian, or perhaps even English, may be desirable. The French translation, by Robert Weill, is adequate on the whole and includes a new preface by one P.-P. or Pierre-P. Grassé (1) as well as the original postface by Gérolf Steiner, who seems to have been a close associate—almost an alter ego—of the late Harald Stümpke.

The first possible mention of a rhinograde was in a poem by Christian Morgenstern, perhaps dating from 1894 but published in 1905. Although the pages of *Science* rarely contain poetry of quite this caliber, that poem is so significant that I give a free translation of it (2):

Behold the prideful walk-on-nose,  
The nasobeme with nasal toes;  
Behold also his handsome pup.  
'Tis true you cannot look him up:  
He figures not in Mayer or Brehm;  
No reference work contains his name (3).  
In this my song he makes his bow  
To all of you, and that is how  
At last you can, complete with pup  
(As I have mentioned farther up),  
Behold the prideful walk-on-nose,  
The nasobeme with nasal toes.

As Stümpke points out, not only does this verse in its meter and form, here faithfully preserved, closely imitate the limping gait of the animal, but also it portrays the species in an identifiable way: it is *Nasobema lyricum* (see Exhibit A, on the left-hand page).

Although the peculiarity of walking on its nose, or in this species its four noses, inspired the poet and has given a name to the whole order, this trait is by no means common to all members of the group. It is best developed in the Tetrarrhinida (which include *Nasobema*) and, in quite a different way, in some but not all Hopsorrhinida. The unparalleled adaptive radiation of other forms is so diverse that some are, in certain views, almost indistinguishable

from flowers—for example, *Corbulonasmus* in nasal view (Exhibit C) and others from flatworms (for example, *Remanonasus* in any view). Indeed Grassé says of *Remanonasus* that it is a flatworm, but he is obviously wrong (4). There are other remarkable examples of adaptive convergence, but still other species are adaptively unique not only among mammals but also among all animals. I need only mention *Rhinochilopus musicus* whose nasal organ is literally an organ: a tamed individual learned to play two fugues by Bach, albeit with an undue tremolo.

The convergences and divergences as well as the great richness in species are completely explicable by the synthetic theory of evolution (5) in connection with the fact that the rhinogrades have evolved in isolation on a remote archipelago, the Hi-Iay Islands, to give their protean name the usual English form. The ancestor of the rhinogrades was plainly a shrew, the only one ever to penetrate far out into the Pacific. There it encountered not only open niches but also yawning cavities in the ecology, and its descendants filled them with uncontrolled exuberance almost as fast as you can say "Galápagos," or "Drepaniidae."

Stümpke's anatomical notes are uneven, detailed for some species but inadequate for others. His accounts of behavior and ecology are, however, as complete as possible and are real models of their kind. Fifteen plates and 12 text figures portray the living appearance and, in a few instances, the anatomy of representative genera. These illustrations are generally accurate except for Figure 9, which shows four claws on the tail of a species (*Phyllohopla bambola*) that happens to be the only hopsorrhinid that does not have a clawed tail. A map of the Hi-Iays (or, in the French text, Aïeïeïeïes) is provided, as well as a bibliography, complete except for a strange omission noted in the next paragraph. There is no index.

It is a custom, if not a duty, for a reviewer to hint that he knows more about the subject than the author and that the book would have been better if he, the reviewer, had taken time out from more important things to write the book himself. I must, then, note some defects. Several of Stümpke's family names (Rhinostelidae, to mention but one) are criminal violations of the International Code of Zoological Nomenclature. There is not a single rotated matrix or estimate of a third-order parameter in the book. Its taxonomy is painfully phylogenetic

and is egregiously old-fashioned in not adhering to the principles of Adanson (1727–1806). Worst of all, perhaps, is the inexplicable failure to cite the few but precious American studies in rhinogradology. Grassé's new preface does indeed mention "Olive-Real [misprint for Olive-Earl] Dibson (de Kansas City, U.S.A.)" and "G. G. Simpson" (no address given), the latter evidently a fictitious name intended to satirize Dibson. These citations are, however, so critical and slighting that they will not hearten American readers. The French edition is further at fault in introducing the quite unnecessary vernacular synonyms proposed by Bouffon (6).

I have called this a definitive work, and so it is in a sadly literal sense. A slight miscalculation, such as could happen to anyone, led to the complete obliteration of the Hi-Iay Archipelago in a recent atom bomb test. The holocaust destroyed not only the last living rhinogrades and not only all study specimens, which had of course been confined to the Darwin Institute at Mairuwili, Hi-Iay, as national treasures, but also the entire community of European rhinogradologists, who were studying in Mairuwili (or Miroavilly) at the time. We shall not even try to see their like again.

Grassé's preface closes with a gracious aphorism: "Biologiste, mon bon ami, souviens-toi que les faits les mieux décrits ne sont pas toujours les plus vrais." I may, then, restrict my final word to a more special group of biologists, the students of extraterrestrial life: This work, of passionate interest for all, is especially pertinent for you who share its outlook and methods (7).

#### References and Notes

1. This Grassé signs himself "Membre de l'Institut" but does not say *what* institute. His grasp of the subject is such that he is not likely to be a member of l'Institut de Bordeaux et de l'Univers de Rhinogradologie.
2. As a matter of fact, this is a translation of the French translation and not of the original poem. A German translation of the English translation of the French translation of the German poem will be prepared in my laboratory as soon as we receive another grant.
3. Those who prefer a different mispronunciation of "Brehm" may substitute the following line:  
No reference work cites "nasobeme."  
Use of the French form "nasobème" permits this substitute line to rhyme with still a third mispronunciation.
4. It is not right to call a mammal a flatworm just because it has lost its mamma.
5. Pace Grassé, if I may say so.
6. L. Bouffon, senior author of numerous rhinogradological works by his students. Not to be confused with G. L. L. de Buffon, an earlier patabiologist but not rhinogradologist.
7. Preparation of this review has been inadequately supported by grant No. 034-62B from l'Institut de Bordeaux et de l'Univers de Rhinogradologie (IBUR) and by contract No. 3,141,593 of the Nasobeme and Supra-terrestrial Agency (NASA).