

lysis – there are also other, simple and impartial reasons which force me to consider Professor Wilson's explanation of the origin of the West Indian fauna as substantially wrong.

The analysis of WILSON (1985 c) attempted a statistical demonstration that Old World genera of ants present in the Recent Hispaniolan fauna are more numerous (expressed as "have reached the Antilles more often and became extinct less frequently") "and hence show evidence of greater colonizing ability" than they are in the fossil fauna (i. e. the presence of Old World ant genera in the Caribic area is greater today than it was in amber times and this should be explained by dispersal).

Some scientists, probably best represented by MAYR (1946) and DARLINGTON (1957), suppose that species and higher taxa originated in a geographically limited "center of origin" from which they spread in space through time. Members of this school refer explicitly in their work to the writings of DARWIN. Others scientists, best personified by CROIZAT et al. (1974), assume an earlier cosmopolitanism of the ancient floras and faunas followed by speciation through morphological specialization and area restriction. These scientists do not recognize a single historical leader, but, to my knowledge, the first to formulate clearly principles similar to those supported by the second school was TROUËSSART who stated (1890, page 312): "la faune actuelle n'est . . . qu'un reste très incomplet d'une faune antérieure plus riche et plus généralement répandue".

It is clear if there could be shown that the cosmopolitanism in the present Caribic fauna exceeds that in the amber fauna – as it is asserted by WILSON (1985 c, 1988) – this could be a strong argument in favour of the first school of thought. On the contrary, presence of faunal elements in the Central American amber fauna now restricted to the Old World – like *Leptomymex* or the *Pheidole* discussed in this paper – can be an evidence for a former greater cosmopolitanism of the ant fauna and, hence, a proof in favour of the second biogeographic school.

The original analysis from which the conclusions of WILSON (1985 c, 1988) had been drawn contains several factual, methodological and logical sources of error. These sources of error can be grouped in the following five categories affecting 1) the data, 2) the definition of the variables, 3) the choice of the statistical test, 4) the statistical constraints, and, 5) the hypothesis tested. I shall explain each of them in the following five paragraphs:

1. The data. – The units of count on which the analysis is based are "ant genera and well-marked subgenera". It may prove difficult to find two taxonomists agreeing entirely on the same list of genera, but consideration of "well-marked" subgenera adds to the list a major component of subjectivity. It appears that consideration of these subgenera does not change anything significant either with respect to the distribution patterns of the Hispaniolan ants or to the major conclusions to be drawn about them besides than lengthening the list of taxa. Under paragraph 3 I shall show the necessity for greater sample sizes enabling the statistical treatment of the data and the failure to attain an acceptable size in the analysis by WILSON (1985 c). The list of taxa, in itself, is either very subjective or erroneous in some respects. Additional changes are necessary today because of taxonomic information published after 1985; new ant genera have been equally recorded in amber after 1985 and some are still unpublished. I shall give an updated list of the Hispaniolan ant genera in which all differences with WILSON's list are individually justified in parentheses after each generic name. Excluding three genera probably introduced on Hispaniola by man