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## INTRODUCTION

The search for an understanding of evolutionary processes affects all biologists, yet, despite our confidence in the scientific method, we are really no closer to an explanation than were the philosophers of natural history prior to the publication of Charles Darwin's works. Most biologists consider that an adequate scientific explanation is available for evolutionary mechanisms and for the biogeographic patterns of today's organisms. But a few are not satisfied and are seeking alternatives. Three young New Zealand biologists believe that the writings of Leon Croizat, overlooked for 30 years by the mainstream of biological research, deserve more attention. This special issue of *Tuatara* is devoted to Croizat and an assessment of his work by R. C. Craw, J. R. Grehan and M. J. Heads. His original books and papers are not readily available and, at first reading, not easy to digest. It is hoped that the summaries and interpretations in this issue may help break down some comprehension barriers and enable Croizat's work to be judged by a wider audience.

Croizat does not conform to our view of a typical biological research worker and, not surprisingly, he has come up with original, non-conformist ideas about the history of life on earth. Some relevant biographical notes have been provided by R. C. Craw (pp. 5-7). He was a botanist, biogeographer and evolutionist who built up his own individual understanding of living organisms directly from his own botanical research and from years devoted to literature studies on major systematic revisions of animals and plants. His biogeographical work, for which he is probably best known, is discussed by R. C. Craw (pp. 8-13). One outcome of his efforts at synthesising information from the literature was a vehement disregard for Darwin and the adoption of a novel approach to evolution based on his appreciation of the distribution of organisms in space and time. His writings on evolutionary mechanisms are reviewed by J. R. Grehan (pp. 14-19) followed by some comparable, but little known, statements by Darwin concerning the "Laws of Growth". Darwin did not pursue this line of thinking, choosing instead to argue for natural selection as the primary mechanism of evolutionary change, a viewpoint that Croizat regarded as a major flaw in Darwinian theory. His criticism of Darwin (reiterated in many of his publications) is included here in the form of a translation from Spanish provided by M. J. Heads (pp. 21-25), who also contributes an important review of the comprehensive botanical contribution, *Principia Botanica* (pp. 26-48). The concept of this issue was being discussed with Croizat's before his death in November 1982, by which time he had submitted a manuscript to *Tuatara*. In this posthumous paper (pp. 49-68) Croizat conveys his frustration over the manner in which his work has been received and misinterpreted by Ernst Mayr. The manuscript has been condensed somewhat by R. C. Craw. Finally, a valuable bibliography of his scientific works has been compiled by M. J. Heads and R. C. Craw (pp. 67-75).

The enthusiasm of the three New Zealand contributors toward their self-appointed tasks knew no bounds and made overall editing very straightforward. My thanks to them.

G. W. Gibbs