

EVOLUTIONARY BIOINFORMATICS

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Evolutionary Bioinformatics aims to make the "new" information-based (rather than gene-based) bioinformatics intelligible both to the "bio" people and the "info" people. Books on bioinformatics have traditionally served gene-hunters and biologists who wish to construct family trees showing tidy lines of descent. While dealing extensively with the exciting topics of gene discovery and database-searching, such books have hardly considered genomes as information channels through which multiple forms and levels of information have passed through the generations. This "new bioinformatics" contrasts with the "old" gene-based bioinformatics that preoccupies previous texts.

Evolutionary Bioinformatics extends a line of evolutionary thought that leads from the nineteenth century (Darwin, Butler, Romanes, Bateson), through the twentieth (Goldschmidt, White), and into the twenty-first (the final works of the late Stephen Jay Gould). Long an area of controversy, diverging views may now be reconciled. The book is unique in emphasising non-genic aspects of bioinformatics, and linking modern evolutionary biology to a history that extends back to the nineteenth century. Forms of information that we are familiar with (mental, textual) are related to forms we are less familiar with (hereditary).

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