

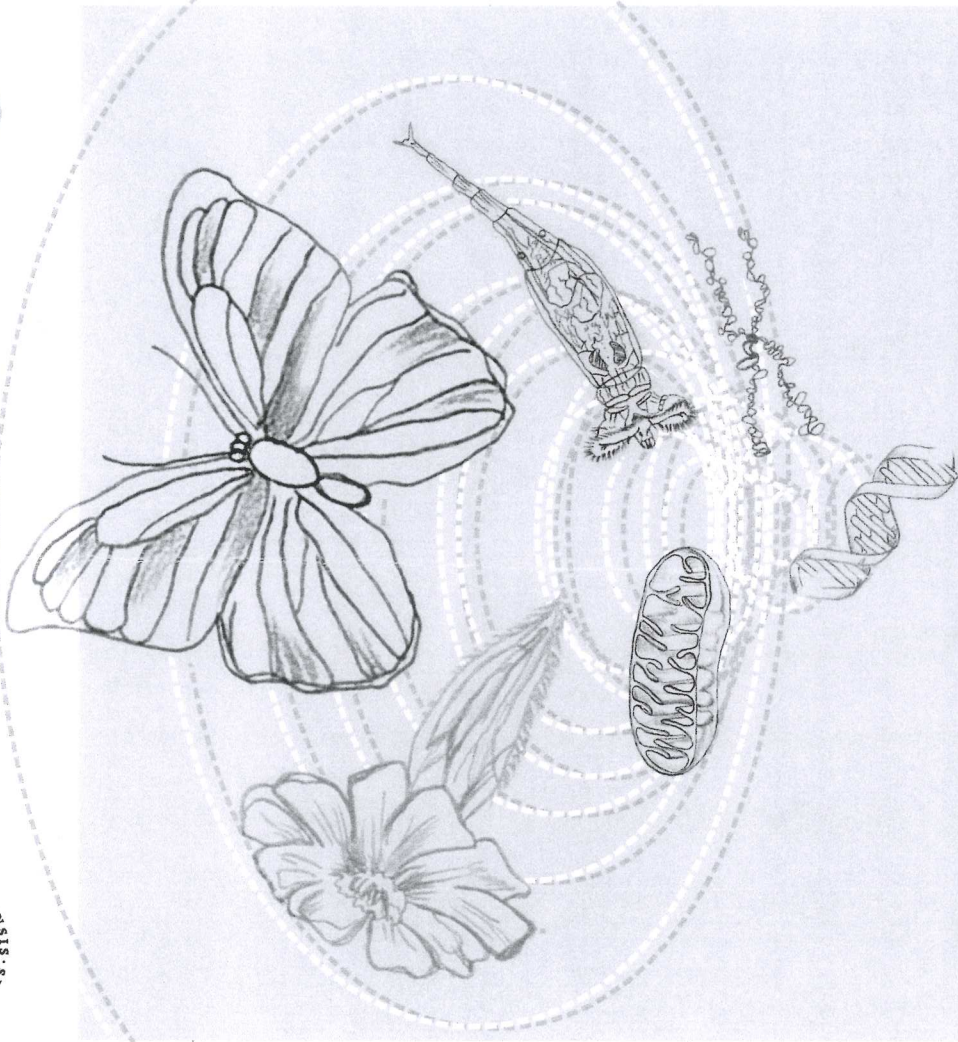
## Abstracts

**Diego Fontaneto***CNR, Istituto per lo Studio degli Ecosistemi, Verbania, Italy***Possibility for speciation events with non-recombining genomes: the bdelloid rotifers**

Is speciation possible in the absence of sexual recombination? Theory predicts that reproductive isolation is a key mechanism in special events; thus, organisms that have non-recombining genomes should not have species as we know them. Bdelloid rotifers, a group of microscopic aquatic animals, have been dubbed an 'evolutionary scandals' because they do not know the theory and more than 450 obligately parthenogenetic species are known from morphology. I will provide empirical evidence to test three alternative

hypotheses to explain the apparent evolutionary paradox of bdelloid rotifers: 1) bdelloids may have some hidden sex and thus bdelloid species are a consequence of reproductive isolation; 2) bdelloid species do not exist and are merely figments of taxonomists' imagination; 3) speciation may happen even in the absence of sexual recombination. As a concluding remark, I will try to convince that sexual recombination not only is not so important as a mechanism favouring speciation, but actually it could be a hindrance to speciation events.

Reference: Fontaneto D, Heriou EA, Boschetti C, Caprioli M, Melone G, Ricci C & Barraclough TG (2007) Independently Evolving Species in Asexual Bdelloid Rotifers. *PLoS Biol* 5(4): e87. doi: 10.1371/journal.pbio.0050087.



# Evolution of Non-recombining Chromosomes and Genomes

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