GENOME RESEARCH
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Research

Methods

(continued)

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Cover In reciprocal crosses, two kinds of fishes, *Megalobrama amblycephala* (herbivore) and *Culter alburnus* (carnivore) (left bottom corner), produce two kinds of hybrid lineages (middle), which are herbivorous and possess two subgenomes derived from their parents. The allelic recombinant events in the genomic DNA (middle) and reflected in mRNA levels are found between two subgenomes in the hybrids. In addition, expression divergence with additive and dominance effects and *cis*- and *trans*-regulation are observed in the hybrids. These changes represent alternative strategies for counteracting deleterious effects of the subgenomes and improving adaptability of novel hybrids, and provide insights into the evolution of vertebrate genomes immediately following hybridization. (Cover artwork by Chaosi Liu, jessieliu2019@yeah.net. [For details, see Ren et al., pp. 1805–1815.])