

The Basic Unit of Evolution is the Host-Symbiont "Biocartel"

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The species is widely recognized as the unit of evolution, but it cannot be. Because, no free-living species evolves by itself. It has parasites, normally many species of parasites; some of which are unique to it. A one-to-one comparison would indicate that there are as many, if not more, species of parasites than there are of free-living hosts. Therefore, parasites are the most numerous species on Earth. Parasites cannot evolve without their hosts. Consequently, the host-parasite unit must evolve together. Single-entity free-living species devoid of parasites do not exist in nature; they are abstractions. Nevertheless, they form the basis for almost all studies of evolution. A more realistic unit would consist of a host species plus all of its symbiont species, what I call a "biocartel." The concept is similar to that of a chemical atom, with the host species at the nucleus and its symbiont species represented as a probabilistic frequency distribution analogous to the orbiting electrons. Just as atoms share electrons in chemical bonds, biocartels can share symbionts to form more cohesive ecological groups. Evolution, then, occurs within a huge matrix of interacting biocartels, each host and each symbiont pursuing its own Darwinian struggle to survive, but within the competitive context of a symbiotic web.

This is an abstract, printed without review.

