Spatial Competition between Corbicula manilensis (Philippi), the Chinese Clam (Corbiculidae), and Fresh-Water Mussels (Unionidae) in the Waccamaw River Basin of the Carolinas (Mollusca: Bivalvia)

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We found dead mussel shells and abundant living Corbicula below the confluence of the Waccamaw River with the Intracoastal Waterway (Horry County, northeastern South Carolina), where the River is profoundly altered by human activities. Above this confluence, where the River is, in general, little disturbed, we found mussels increasingly dominant over Corbicula as we sampled farther upstream, until the latter disappeared. Corbicula reappeared in Lake Waccamaw (Columbus County, southeastern North Carolina), but mussels persisted in apparently undiminished numbers. The Lake is almost encircled by extant and potential land development, but its floor remains negligibly damaged. It appears that Corbicula does not (and perhaps cannot) dominate indigenous bivalves in nearly or quite natural habitats, at least in slowly moving, soft-bottom Coastal Plain streams of the Atlantic drainage. Corollarily, not to disturb aquatic habitats may be man's best defense against domination of the benthos by Corbicula.

Reprinted from The ASB Bulletin, Vol. 23, No. 2, April 1976, p. 60.