peninsula was narrower and shorter, terminating near Lake Okeechobee. Off the southwestern end of the peninsula was a large oval island. A long, wide lagoon, including the present St. Johns River, extended southward from Orange Bluff on St. Marys River to Sanford, and was separated from the open ocean by a chain of large islands.

The shore extended much farther out on the continental shelf as little as 11,000 years ago (Emery, 1967, fig. 9). At that time it may have been easier for Unionidae to disperse along a largely baseleveled coast, which might explain the presence of one unionid, *Elliptio dariensis* (Lea), found only in the Altamaha and St. Johns river systems. The distribution of some species of Hydrobiidae (Thompson, 1968), presently restricted to the ocean side of the Pamlico shore, offers striking evidence of repopulation and rapid speciation in this area.

Drainage Systems

Peninsular Florida (Figure 1) averages over 50 inches of rain a year. Much of this sinks into the ground, as the soil is loose and sandy, and is stored up as a great reservoir of ground water, some of which seeps to the surface in artesian springs. These springs usually rise through deep vertical holes in the underlying limestone and result from rain that fell on a higher level. Most of the isolated springs have no Unionidae in them, but those that form the sources of rivers often have at least *Elliptio icterina* (Conrad) or *E. buckleyi* (Lea). Many of the springs contain endemic species of Hydrobiidae (Thompson, 1968).

Wherever the surface of the ground dips below the water table, lakes are formed and, when there is an outlet at a lower level, water flows away as a surface stream. Many lake basins are the result of the dissolution of underlying limestone, though some occupy former sea floor depressions.

Particularly in the highlands the landscape is dotted with solution impressions. Some of these basins lie between the limits of fluctuation of the water table, and while they contain water in the wet seasons, during

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Figure 1. Drainages of peninsular Florida and relevant ones in the Apalachicolan and Southern Atlantic Slope regions. The major drainage areas of peninsular Florida are indicated by the dashed lines (after U.S. Dept. Interior, Geol. Survey. 1960. Water Supply paper 1304, pl. 1).

Apalachicolan Region: 1. Apalachicola River, 2. Ochlockonee R., 3. St. Marks R., 4. Aucilla R., 5. Econfina R., 6. Suwannee R., 7. St. Marys R., 8. Satilla R.

Southern Atlantic Slope Region: 9. Altamaha River.

Peninsular Florida Region: 10. Waccasassa River, 11. Withlacoochee R., 12. Pithlachascotee R., 13. Hillsborough R., 14. Alafia R., 15. Myakka R., 16. Peace R.

Kissimmee River System and Everglades: 17. Caloosahatchee River, 18. Fisheating Creek, 19. Lake Okeechobee, 20. Istokpoga R., 21. Kissimmee R.

St. Johns River System: 22. Econlockhatchee River, 23. Wekiva R., 24. Oklawaha R., 25. Haw Creek, 26. Rice Cr., 27. Black Cr., 28. Julington Cr., 29. St. Johns R.