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COMPARISON OF SIX BIOLOGIC INDICATORS OF HYDROLOGY AND THE LANDWARD EXTENT OF HYDRIC SOILS IN WEST-CENTRAL FLORIDA, USA CYPRESS DOMES

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Abstract: Elevations of six biological indicators of historic water levels and hydric soils at twelve isolated *Taxodium ascendens* dominated wetlands in west-central Florida, USA were compared with long-term surface-water elevations to evaluate use of the indicators for inferring wetland hydrology when adequate water-level data are unavailable. Indicators included the elevation of *Lyonia lucida* root crown bases, the inflection point at the angular change of *T. ascendens* buttress swellings, the lower limit of epiphytic bryophytes (moss collars) growing on *T. ascendens* trunks, the uppermost elevation of woody adventitious roots of *Hypericum fasciculatum*, ground elevations at the lowest *Serenoa repens*, and the ground elevation at the landward-most *T. ascendens*. Elevations of *L. lucida*, moss collars, and buttress swellings did not differ (p=0.29) and were higher in elevation than the other indicators and hydric soils. Based on wetland water-level records for a recent ten-year period, *L. lucida*, moss collars, and buttress swellings were inundated 2–3% of the time, other indicators were inundated 13–29% of the time, and hydric soils were inundated 38% of the time. The biological indicators examined can be associated with hydrologic patterns in cypress domes in west-central Florida and may be useful for inferring hydrologic regimes for other regional wetlands.

Key Words: Florida, cypress domes, hydrology, hydrologic indicators, hydric soils, *Lyonia lucida*, epiphytic bryophytes, moss collar, buttress, *Taxodium ascendens*, *Hypericum fasciculatum*, *Serenoa repens*

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