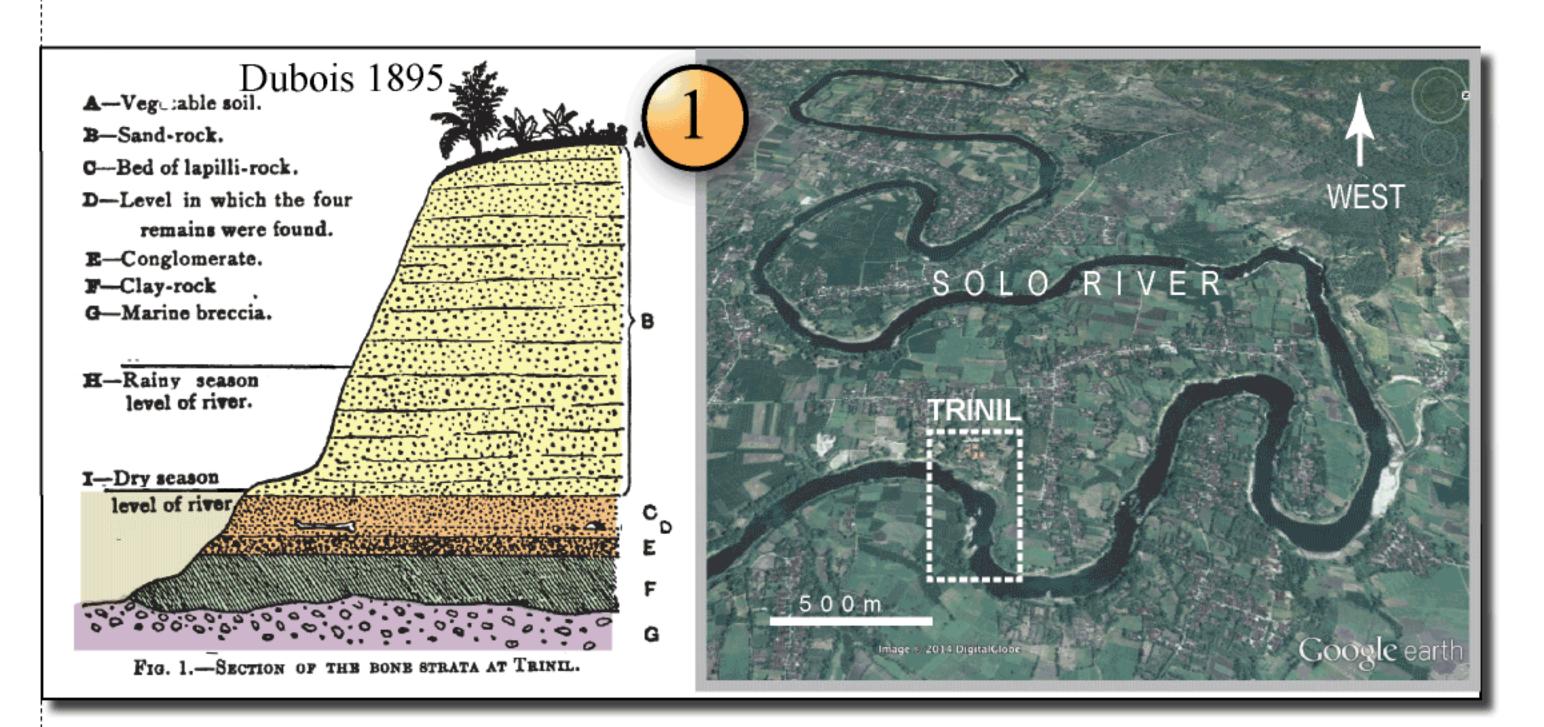
Did Trinil Femur I originate from a younger formation than the *Homo erectus* skullcap? Implications of early site photographs and other provenance records



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ABSTRACT— Some investigators contend that Trinil Femur I is not *Homo erectus* but *Homo sapiens*, and instead of originating from the Trinil-skullcap bonebed as Eugene Dubois reported, came from a second, younger formation. However, scrutiny of early site photographs and other records support Dubois' provenience account [O1], not this two-formation alternative.

In 1892 Dubois' field supervisors unearthed the skullcap from a fossiliferous sandstone ledge jutting into the Solo River. In 1892 they found Femur I, also well-fossilized, ~15m west of the skullcap, after first removing sufficient bedrock to trench the bonebed below river level [2, 3]. Although Dubois missed seeing the femur *in situ*, he had investigated the near-flat lying strata being dug in July, and accepted his supervisors' assurances that femur and skullcap came from approximately the same elevation.

No real-time contextural drawings are known, but Dubois' famous 1895 cross section places both fossils at one level within the horizontal bonebed [1]. The bed is underlain by conglomerate and claystone, and overlain by conformable sequence of sandstone beds, capped by soil. The claystone-conglomerate-bonebed-sandstone sequence, ~12m thick, is now part of the Kabuh Formation (and Middle Pleistocene faunally).

Dubois' sandstone stack is plainly visible atop the bonebed in high-quality photographs taken in 1894 [2], 1900 [5] and 1907 (as Dubois and the Selenka Expedition excavated southward ~30 m). In 1894, sandstone was just meters from the skullcap-femur discovery points; only soil overlies sandstone in adjacent high embankment [2]. In the 130-m-long (~7.5-m-high) 1900 wall [5], there is a westward-thickening wedge of channel-fill sandstone resting discordantly on the horizontal stack KF in [5]. The wedge reaches river level ~70 m southwest of the discovery points. However, these deposits are unlikely to be the postulated alternate source for Femur I. They probably did not extend to the 1892 discovery point (e.g., they are missing in the 1894 back wall), and later geological investigations included them in the Kabuh Formation.

Bottom line —— Site geology and archival records support Dubois' claim

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