1. Soil C data was calculated from bulk density and organic material concentration.

The paper does not report carbon density directly. We calculated carbon density from Fig. 5, which reported percent organic matter and bulk density, but not carbon concentration. To calculate carbon density, their data were entered into a spreadsheet, then processed with SAS code to calculate carbon density. The calculation steps were as follows:

a. Convert organic matter (OM) to organic carbon units.

We used the following equation developed by James Holmquist (in review):

SoilCC=0.074\*(OM/100)\*(OM/100) + 0.421\*(OM/100) - 0.0080, where

SoilCC = C concentration in units of grams C per grams soil

OM = organic matter concentration in units of grams OM per grams soil

b. Convert soil carbon concentration (SoilCC) to carbon density. The rate we used here was from 1938-1994.

SC=SoilCC\*BD, where

SC=Soil carbon density in units of grams carbon per cubic centimeter (g/cm3)

c. Soil C rate data was calculated from Soil C and accretion rate (Table 1).

SC rate= SC \* SC\_rate\*10000; (SC rate unit is g m2 yr1)



