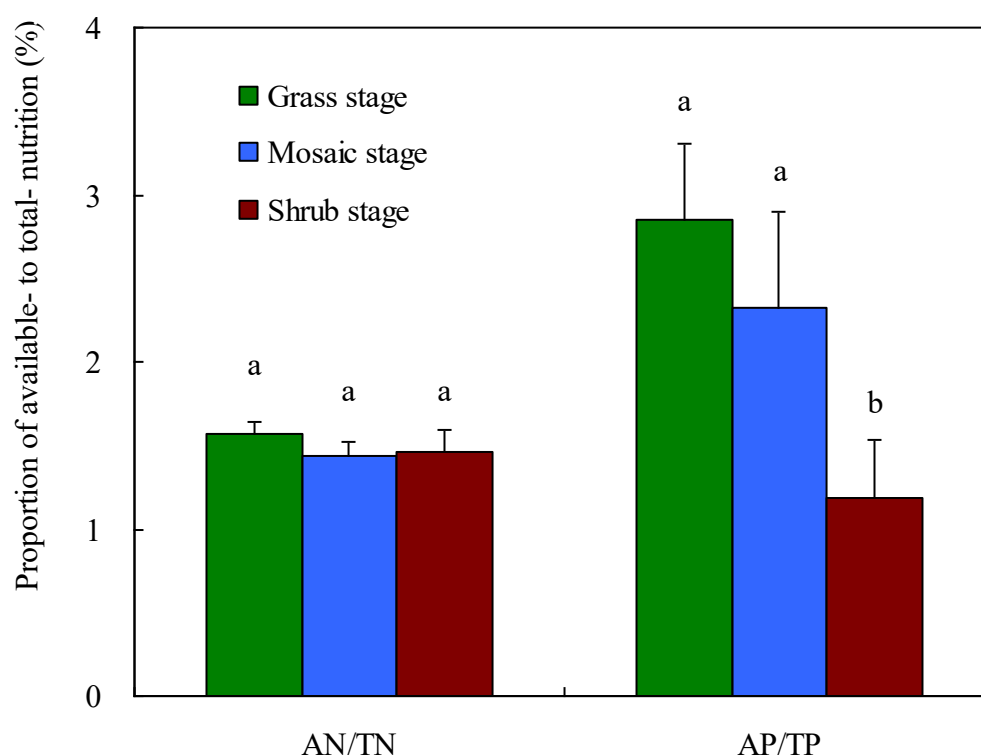


Figure S1. The proportion of soil available- to total- nutrition with shrub encroachment.



Same letter within a same characteristic indicates no significant differences ($p > 0.05$). AN/TN represents the proportion of soil available nitrogen to soil total nitrogen, AP/TP represents the proportion of soil available phosphorus to soil total phosphorus. Generally, available-nutrition include all water-soluble nutrition, which is easier to loss by leaching in this high rainfall area. So, reducing this proportion is good for reducing leaching loss of phosphorus. Here, the proportion of soil available phosphorus clearly reduced with shrub encroachment. However, there is no such phenomenon in nitrogen.