

Past forest clearance in hills on the basis of abandoned charcoal producing kilns

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This presentation attempts to estimate characteristics of past forest clearance for charcoal production and succeeding landscape change on the basis of abandoned charcoal producing kilns, which were constructed in fields mainly before 1950's. An example of Tsushima City shows that the backslope of active charcoal producing kiln is occupied by different-aged units of secondary vegetation (originated from logged-off lands) which spread side by side in sloping direction. Similar landscape was probably dominant in hills where charcoal production was active in past. The result of trees inspection near the abandoned charcoal producing kilns of about 70 to 80 years-old around Mt.Izumigatake (1175 m) located in northwest of Sendai suggests that intolerant trees are dominant within a radius of dozens of meters of the kilns. It means that forest clearance before 70 or more years affects the present species composition. Distributions of the abandoned charcoal producing kilns were investigated in the vicinity of Mt.Ariake and Sumo-shiratake in Tsushima City, and Mt.Izumigatake. The results show that extent of the past forest clearance for charcoal production is easily estimated based on the distribution of the kilns. It is concluded that abandoned charcoal producing kilns are useful indicator of past forest clearance for charcoal production and succeeding landscape change.

Keywords: Hills, Forest clearance, Charcoal production, Charcoal producing kiln