

The Influence of Motorized Access on Hiker's Route Selection at Mt. Tsukuba

Taiichi Ito & Mariko Ryugo

University of Tsukuba, Japan
taiichi@sakura.cc.tsukuba.ac.jp

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Introduction

Mt. Tsukuba, designated as one of the quasi-national parks of Japan, is not only a regional landmark but also has been a major outdoor recreational area since the 1730s. As a result, in spite of its modest altitude of 875 meters, diverse hiking routes to its twin peaks have been developed from all directions. At present, seven routes are officially recognized, and they bring hikers to the summits in less than two hours. The number will be doubled if off-beaten tracks are counted. In addition, two motorized means such as cableways are supplied for casual tourists. Thus, the hikers have diverse options to choose from almost 200 combinations at Mt. Tsukuba. This study was conducted to clarify the relation between hiker's route selection and its reasons as a basis for the better management of this area.

Methods

The authors surveyed hiker's route selection and its reasons in 2003, then they did similar one focusing on its relation to the mode of traffic access in 2005. Both surveys conducted on clear days in autumn at the col between the peaks because this is the only place most hikers from various routes come and have a break. The interviewers showed a route map to hikers and asked them the routes they took or going to take, then wrote down their selection and its reasons. The 2003 survey was conducted on 17th and 18th of December, and answers from 461 hikers were obtained. The 2005 survey was done on 23rd of October and 13th of November and collected 185 answers.

Results

The 2003 survey revealed that hiker's route choices are quite limited in spite of diverse possibilities (figure. 1). Popular trailheads are located close to cableway terminals with large parking lots. Such a trend brought crowding and soil impact on these trails. Further analysis on the route-selection patterns among hikers showed that three fourths of them took different routes for descending (figure 2). It is understandable that hikers prefer to experience different routes on their way back to enjoy a diverse environment just like experiences of Japanese strolling gardens. The traversing will give more diverse experiences than circulating, but those who left their cars have to walk on a road to recover them. Thus, car-dependent hikers must choose a circulating route as a compromise.

It also became clear that almost 70 % of hikers to Mt. Tsukuba came by car. These hikers have more freedom to choose diverse trailheads than those who come by bus because bus stops are limited to

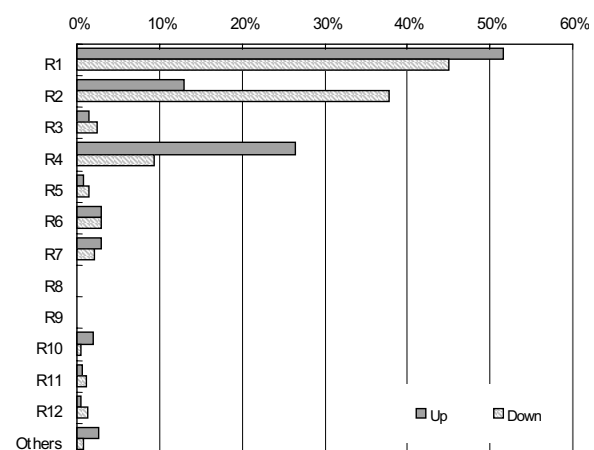


Figure 1: Ratio of Visitors on each Route (N=485).

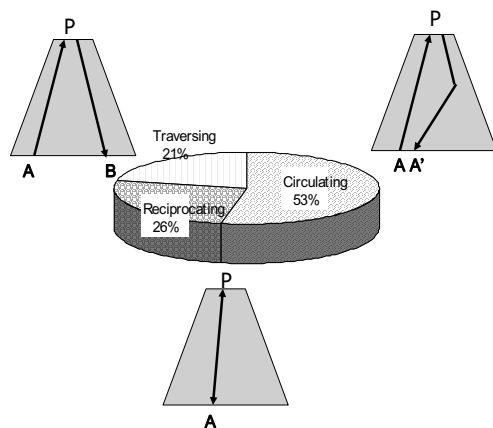


Figure 2: Three Patterns of Visitor's Route choices (N=485).

two major trailheads. However, the 2005 survey results showed that 70% of those who arrived by bus chose a different route on their way back while 70% of car-dependent hikers took exactly the same route to descend. From these results, it can be said that private vehicles restrict the spectrum of hiker's route selection. Once they leave their cars, they have just two choices, a simple return or a circulating with relatively shorter distance from the starting trailhead. Regarding cableway users, 43% of them purchased one-way tickets. This means they prefer to walk on their way up or down to diversify their experiences while enjoying easy transfer.

Shiratori and Ito (2001) mentioned that trekkers tend to choose trailheads at higher altitude whenever available at Mt. Daisetsuzan. Such a trend is not obvious at Mt. Tsukuba since the altitude of the most popular trailhead is 200 meters while some of less-used ones are around 500 meters. However, hikers with cars prefer to come back to or close to the same trailhead regardless of its altitude. They have ambivalent demands that they want to enjoy walking on a trail while avoiding walking on the road on which they drove to come.

Conclusions

The introduction of a shuttle-bus service stopping at each trailhead or opening more circulating trails will alleviate the dilemmas of car-dependent hikers. This will encourage easy walking at the foot of Mt. Tsukuba since there are diverse cultural resources including a historic pilgrim-

age route developed in the early 18th century. However, such options might disperse hiker's impacts under current management conditions.

Mt. Tsukuba has an unusual number of trails, and gives hikers diverse walking experiences. This partially explains why it attracts repeaters in spite of its compact size. However, they tend to avoid crowded times, days or routes. Such factors make hiker surveying at Mt. Tsukuba difficult. We need to develop more sophisticated monitoring techniques.

References

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