

## Estimating the Annual Number of Tourists and Tourism Demand Characteristics on Yakushima Island

—A highly Accurate Estimation Method on Remote Islands—

屋久島における年間観光客数と観光需要特性の推計  
～離島におけるより精度の高い推計法～

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### Abstract

This research is to analyze economics impact of the ecotourism industries in Yakushima Island. Focusing on around year 2000. It was found that there were 200 thousand visitors to Yakushima in a year approximately, 19-21% of which (34000-38000 people) took part in ecotourism activities. The percentage of visitors who were ecotourists almost increased threefold from 12% in the summer of 1997 to 30% in that of 2002. 57-60% of ecotourists used package tours, and this result implied the ecotourism industries had tight relationship with the travel agencies, that that is, the ecotourism industries in Yakushima Island has developed based not on alternative tourism but on an optical tourism but on an optical tourism in mass-tourism industries. The business analysis made it clear that the ecotourism industries were considerably in good business environment; consequently, the total amount of sales in the Yakushima ecotourism industries uses were estimate to be 510-570 million yen in a year. The dramatic rise in the number of ecotourists may result in excessively intensive uses mountain regions. Though the public authorities have conducted a variety of projects such as regulations of ordinary-car entries, fundamental issues concerning overuse issues still remain.

**Keywords:** ecotourism, world natural Heritage, Estimation method, tourism resources

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屋久島毎年在游客数和观光需要特殊性的推算，用精确度高的方法推测。

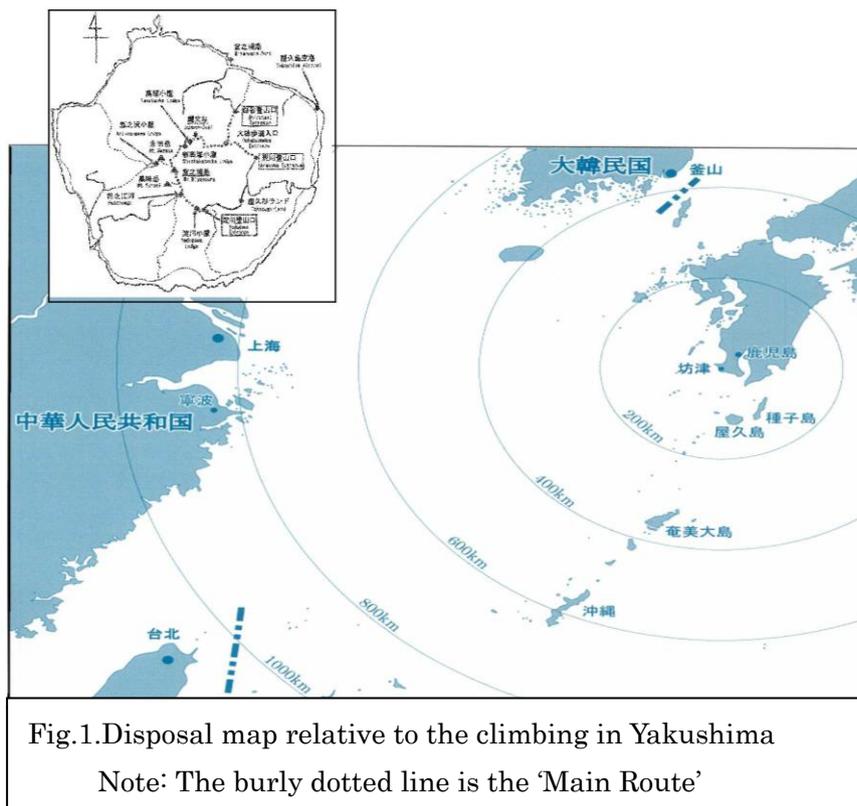
竹下俊一<sup>1)</sup>、李礼<sup>2)</sup>、石田尾博夫<sup>3)</sup>

本调查研究知道什么是生态旅游和组件关系。理论上受到轮流二韵律的潮流，发展的东西被当作生态旅游。但是，与鱒鱼二韵律的关系在屋久岛进行的生态旅游更紧密被了解清楚

了。能理解为包价旅游的自选旅游，而不是被提倡的轮流二韵律的潮流从以上的结果理论上存在着屋久岛的生态旅游。

用竹下俊一的报告，利用关于时间顺序性的分析 X<sup>2</sup> 审定以及剩余误差分析，在 1997 年和 2002 年是，并且统计学上在观光需要可以看到差别，或者验证了。以及，关于零假设被显著水平 5%拒绝的东西，正用正文提到。

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### 1. Thesis summary

In recent years, it has become clear that World Heritage sites, which are supposed to preserve and share the value of precious cultural properties and nature, are facing various problems, such as a rapid increase in the number of tourist and environmental destruction, as they become more and more of a tourist destination being registered. World Heritage sites in various parts of the world are now suffering from a balance

between the protection of Heritage and the use of tourism. This paper examines the function and role of the World Heritage registration in the system of tourism, based on the awareness that “Why does this dilemma arise at World Heritage sites?” 1)

This report is a modified version of the Shunichi TAKESITA paper (Summary) “Characteristics of ecotourists users in Yakushima, a World Heritage Site “ presented at the 55 “ Social an industrial













## Notice:

- 1) Hiroo **ISHIDAO**, Sponsored by the Executive Committee of the World Natural Heritage Conference (20 municipalities in 14 countries in Asia Pacific, 5 government agencies, UNESCO World Heritage Center) “1<sup>st</sup> World Heritage Conference “Yakushima” 2<sup>nd</sup> committee “World Heritage Report” on Chairman’s Report, May 18-19, 2000.
- 2) Shigemitsu **SHIBAZAKI** “Analysis of ecotourism in Yakushima,” National museum of Ethnology, Research Report 193, February 2015, pp. 54-61. The survey period on the tourism demand side is November 2001 (hereinafter, autumn), February 2002 (hereinafter, winter), May 2002 (hereinafter, spring), and July-August 2002 (hereinafter, summer). The result of questionnaire surveys conducted at Yakushima Airport, *Miyanoura* Port, and *Anbo* port at each time were used. Regarding the summer season, the result of a similar questionnaire survey conducted in 1997 were also used to approach changes over time.
  - Shigemitsu **SHIBAZAKI**, Kunihiro **MAKITA**, Yasuhiro **YOKOTA**, Shin **NAGATA** “Impact of World Natural Heritage Registration on Local Resource Management System: A Case Study of Mountainous Area of Yakushima”, *Forestry Economy* 59 [8], 2006, pp. 1-16...
- 3) **SHIBASAKI** and **NAGATA** 「Estimation of the Number of Tourists to Yakushima Island.」 『*Journal of Forest Economics* 138』 .
- 4) It’s being put into effect by making reference to the following document about the outline of a questionnaire survey and acquisition method of

data. Shigemitsu **SHIBAZAKI**, Yusuke **SAKATA**, and

Makoto **NAGATA** “the number of annual tourists in Yakushima and estimation of sightseeing demand property-expensive stochastic method which is higher than it can be put in the isolated island”, 2003 and 1-25 page.

- 5) Shunichi **TAKESHITA**: For time series analysis, it was verified statistically whether there is a difference in tourism demand between 1997 and 2002 using  $X^2$  test and residual analysis . And we are pursuing in the text about the null hypothesis rejected at the significance level of 5.
- 6) Estimating the average number of overnight stays on the island, it was estimated that the eco-tourism tourists had 2.7 nights and the non-eco-tourism tourists had 1.9-2.1 nights.
- 7) Hiroo **ISHIDAO**, World Natural Heritage registration and the challenges of creating sustainable tourism destinations-Economic analysis of Ecotourism in Yakushima.55-social and industrial enterpris development policy in EastAsia International Conference (2019.7.20, Tongji University, Shanghai, China).
- 8) Syunichi **TAKESHITA**, Estimating the annual number of tourists and tourism demand characteristics on Yakushima Island-A more accurate estimation method on remote islands.
- 9) Hironobu **BABA** , Kesayosi **KIRA** and Kunihiro **HARUTA**, Behavioral Patterns and Ways of the Climbers at the “ Yakushima ” .Bulletin of the Faculty of Agriculture, Kagoshima University No.46,57-66pp.