

TO CATEGORIES



1.400.000 PAGES OF RESEARCH

MONTHLY
1.200.000
PAGE VIEWS

OVER
300.000
VISTORS PER MONTH

new E-BOOKS 

FULLTEXT SEARCH



NEW: [Advanced Search](#)

Periodicals:

MSF

> Materials Science Forum

KEM

> Key Engineering Materials

SSP

> Solid State Phenomena

DDF

> Defect and Diffusion Forum

AMM

> Applied Mechanics and
Materials

AMR

> Advanced Materials Research

AST

> Advances in Science and
Technology

JNanoR

Biodiversity Preliminary Investigation of Nature Reserve Taoyuan Cave

Journal [Key Engineering Materials](#) (Volumes 467 - 469)

Volume [Materials, Mechatronics and Automation](#)

Edited by Dehuai Zeng

Pages 1753-1758

DOI 10.4028/www.scientific.net/KEM.467-469.1753

Citation Yi Min Tan, 2011, Key Engineering Materials, 467-469, 1753

Online since February, 2011

Authors [Yi Min Tan](#)

Keywords [Biological Diversity](#), [Ecological Condition](#), [Scenic Area](#), [Tao Yuan Cave](#)

Abstract Nature reserve is a significant base for humans to understand, use and protect nature. This study has investigated the ecological environment of Taoyuan cave National Nature Reserve. The results show that: the forest coverage here is high with rich biodiversity; wildlife resources are rich and diverse; air quality and water quality are first class of national level and the average air negative ion concentration is 18,000 ions / cm³ with less bacteria in the air, mild and humid climate, abundant rainfall, multiple microclimate types and good quality of environment. This suggests that the ecological environment of Taoyuan cave National Nature Reserve is in good condition.

Full Paper  [Get the full paper by clicking here](#)

First page example

> Journal of Nano Research

JBBTE

> Journal of Biomimetics,
Biomaterials, and Tissue
Engineering

JMNM

> Journal of Metastable and
Nanocrystalline Materials

JERA

> International Journal of
Engineering Research in Africa

AEF

> Advanced Engineering Forum

NH

> Nano Hybrids



> @scientific.net

Key Engineering Materials Vols. 467-469 (2011) pp 1753-1758
Online available since 2011/Feb/21 at www.scientific.net
© (2011) Trans Tech Publications, Switzerland
doi:10.4028/www.scientific.net/KEM.467-469.1753

Biodiversity Preliminary Investigation of Nature Reserve Taoyuan Cave

Yimin Tan^{1,a}

¹Forest Tourism Research Centre of Central South University of Forestry and Technology,
Changsha, Hunan, 410004, China

^acsuft77@163.com

Keywords: Ecological condition; Tao Yuan cave; Scenic Area; biological diversity.

Abstract. Nature reserve is a significant base for humans to understand, use and protect nature. This study has investigated the ecological environment of Taoyuan cave National Nature Reserve. The results show that: the forest coverage here is high with rich biodiversity; wildlife resources are rich and diverse; air quality and water quality are first class of national level and the average air negative ion concentration is 18,000 ions / cm³ with less bacteria in the air, mild and humid climate, abundant rainfall, multiple microclimate types and good quality of environment. This suggests that the ecological environment of Taoyuan cave National Nature Reserve is in good condition.

As the increasing of nature reserves year by year, the research of domestic scholars on nature reserves increase as well, but most of these studies focus on theoretical researches such as problems and coping strategies in the construction and development of nature reserves in China^[1-3], ignoring follow-up study on some nature reserves of good ecological environment. Taoyuan cave nature reserve is the only National Nature Reserve approved by the State Council within the region of Changsha and Zhuzhou of Hunan Province in 2002, belonging to the ecosystem of original evergreen broad-leaved Forest in subtropical humid region. In order to properly protect the natural resources of Taoyuan cave, from 1993 to 2009, the author has surveyed the resources of Taoyuan cave for many times to study ecological conditions of the area and has proposed corresponding protection measures to provide information for the future management and protection of the area.

Overview of Research Area

Taoyuan cave National Nature Reserve (hereinafter referred to as Taoyuan cave or protected area for short) is located northeast of Yanling County in southeast of Hunan Province with a total area of 113,200 hm²^[6], of which the core area accounts for 30.6%, buffer area 26.9% and experiment area 42.5%. It is characterized by overlapping mountain area, steep terrain, deep valleys and intercrossing streams. The annual average temperature of Taoyuan cave is from 12.3 ~ 14.4 °C; marked by four distinguish seasons, different altitudes and different lengths of each quarter; with the altitude increasing by every 100m, the temperature decrease 0.73 °C and the temperature lapse rate is greater than the global annual average value (elevation increasing by every 100m, the temperature decrease 0.65 °C); Annual average air relative humidity is 86% ~ 88%; the maximum precipitation intensity is 129.6mm • d⁻¹ and the precipitation from April to June accounts for 42% of annual precipitation. Because of the Complex terrain and various microclimate types, it is suitable for the growth of a variety of plants^[7].

Survey and Research Methods

Vegetation Survey. From November-December in 2008, based on An investigation report of natural resources of Taoyuan County, Hunan Ling Tung^[6] and Report on Forest Vegetation of Taoyuan Cave Nature Reserve in Yanling^[8], we combine the method of standard and route investigation to investigate the types and distribution of plant resources in Bluestone Ridge, Skin Pit, Oxhom Ridge, JiangXi Hollow and Yuandun xian of Taoyuan cave.

All rights reserved. No part of contents of this paper may be reproduced or transmitted in any form or by any means without the written permission of TTP.
www.ttp.net (ID: 122.70.132.162-22/12/11, 16:14:21)

CONFERENCE

> GO!

11/16/2012 - 11/18/2012

11/13/2012 - 11/15/2012

The International Conference on Advanced Eng

10/19/2012 - 10/21/2012

2012 International Conference on Vibration, Str

more...