Organic Matter Decomposition Workshop Report

Submitted by Hen-biau King (hbking@serv.tfri.gov.tw) on May 30, 2003

Introduction

In order to conduct a cross-site comparison study on organic matter decomposition experiment among the Asia-Pacific regional LTER sites, a decomposition workshop for ecologists from the region was proposed and held to accomplish the following goals:

1. To review and increase over understanding of past and current knowledge about decomposition processes in forest ecosystems;
2. To share existing results from decomposition experiments among ecologists from various countries of the region;
3. To discuss protocols and common methodology for the follow-up decomposition experiment;
4. To formulate and test hypotheses regarding the major factors that control rates of organic matter decomposition in the region;

The workshop was designed as a pre-meeting for future collaboration of a multi-site organic matter decomposition experiment in the East Asia-Pacific region. The meeting and discussion among potential site collaborators worked towards a successful regional cross-site comparison study. The Taiwan Ecological Research Network (TERN) took the responsibility to organize, host and conduct this workshop and the follow-up on the decomposition field experiment and to publish the group results. Workshop funds were supported, in part, from the ILTER network.

It is hoped that the results of the follow-up decomposition field experiment will be used (1) to construct East Asia-Pacific regional decomposition models; (2) to compare decomposition models for the East Asia-Pacific regional LTER sites with those of the LIDET (Long-Term Intersite Decomposition Experiment Team) for the north America region. Thus, the study of the field experiment is also a regional comparison on organic matter decomposition.

This report included general information, major activities, action items, list of site collaborators and LTER site affiliations, and a CD of the multi-media lecturer's presentation.

General information of the Organic Matter Decomposition Workshop

Time: 26-30 November 2001

Place: Fu-shan Forest TERN site

Participants: 2 categories of participants: lecturers (Hua Chen and Mark Harmon of HJ Andrews LTER site, and John Porter of Virginia Coast Reserve LTER site.) and site collaborators from Australia, China, Indonesia, Korea, Mongolia, Philippines, Taiwan, Thailand, and Vietnam

Funding: ILTER network and TERN

Major Activities of the Workshop

1. Lecture presented by:
   i. John Porter: Information Management.
   ii. Mark Harmon: Review current research on decomposition, nutrient turnover and stores in plant litter, and introduce the designs of on-going decomposition experiments (LIDET) of the US LTER sites
   iii. Chen Hua: Chemical analysis of litter samples and QA/QC
2. Site collaborator presentations (each site collaborator presented a brief review of his (her) country's research on decomposition processes).
3. Field demonstration and discussion of litterbags placement
4. Discussion and protocol drafting, list of action items; and
5. LTER site visitation: Fu-shan site and Nan-jen shan site

Action Items

1. Protocol for specifics—write down the practical things, such as foliar sampling method, litter bags installation, etc.
   Responsible: Hen-biau King and Kuo-chuan Lin
2. Site selection—also involves site characteristics: need someone to synthesize and send out the site description
   Responsible: Carolyn Ringrose
3. Species selection—involves finding samples (site specific) and analyzing samples (central specific);
   Responsible: Silong Wang and Jianwei Tang
4. Write proposal for central activities—include things like selecting litter for the processing, making litter bags, installing in field, data management (a key to obtain funding in future), chemical analysis, synthesis/analysis
   Responsible: Hen-biau King
5. Ratify principles—such as sharing data and publication as a group, in a sense, it's like the idea of a charter, it doesn't have to be long, but needs to outline the

agreements (i.e. principles, guidelines) made as a group
Responsible: Jeff Owen

6. Hypothesis—general hypotheses that the group agrees with
Responsible: Eun-Shik Kim

List of Site Collaborators and LTER Site Affiliations

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