Full-time Members of EEC

Fundamental Research

Prof. Kazuyuki MIKAMI (Director)

Environmental Biology & Developmental Genetics

Phone: 81-22-214-3535

Fax: 81-22-211-5594

Email: mikami@staff.miyakyo-u.ac.jp

Prof. Takashi MURAMATSU

Physical Organic Chemistry

Phone & Fax: 81-22-214-3539

Email: t-mura@staff.miyakyo-u.ac.jp

Noriko MEMEZAWA

(Public Official)

Phone: 81-22-214-3545

Email: n-meme@staff.miyakyo-u.ac.jp

Field Research

Prof. Kosei IZAWA

Anthropology, Primatology & Ecology

Phone & Fax: 81-22-214-3515

Email: k-iza@staff.miyakyo-u.ac.jp

Assoc. Prof. Chiemi SAITO

Conservation Biology

Phone & Fax: 81-22-214-3458

Email: csaito@staff.miyakyo-u.ac.jp

Koji MIZOTA

(Assistant)

Systematic Entomology

Phone & Fax: 81-22-214-3669

Email: mizota@staff.miyakyo-u.ac.jp

System Research

Prof. Masaharu YASUE

Environmental Informatics & Nuclear Physics

Phone: 81-22-214-3537

Email: m-yasu@miyakyo-u.ac.jp

Assoc. Prof. Yoshihiro UGAWA

Bioinformatics

Phone: 81-22-214-3536

Email: ugawa@ipc.miyakyo-u.ac.jp

Yossinoly SATTOW

(Assistant)

Computer Science

Phone: 81-22-214-3458

Email: sattow@staff.miyakyo-u.ac.jp

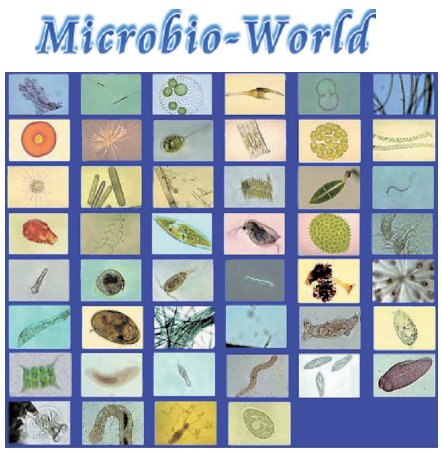
Keiko FUKUI

(Public Official)

Phone: 81-22-214-3542

Email: k-fuku@ipc.miyakyo-u.ac.jp

The wonder of micro-organisms in fresh water is introduced to school children and teachers for environmental education by Prof. Kazuyuki MIKAMI.
Diversity of life was investigated in rivers, ponds and swampy land-rice fields. The information obtained is recorded into a cyber pictorial “Microbio-World” (http://mikamilab.miyakyo-u.ac.jp/) that contain photos and movies.



The life cycle of these organisms such as Paramecium is developmentally or genetically analyzed at molecular level. Influence of environment on life is investigated from the viewpoint of water quality index.

The outcome is reflected also in practicing activities in nature fields called Friendship projects. It is very enjoyable for university students and school children.

Chemical Research Laboratory (Prof. Takashi MURAMATSU)

◆ Environmental Analysis by Measurement of Water Quality

The aim of this laboratory is to understand the interaction between nature and human activity. To understand the dynamic and static processes of Environment, we investigate several indexes that affect the living environment.

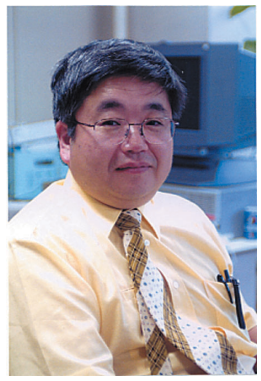
◆ Properties and Behaviors of Chemical Species

The properties and behaviors of model substances, which are useful to elucidate chemical processes in the environment, are investigated by employing a wide variety of analytical and organic chemical techniques.

◆ Training Service of Analytical Experiments

The practice of the environment analysis is being provided for teachers and students of schools.

Yoshihiro UGAWA



As a member of System Research of EEC, I am providing web contents and database for environmental education. And in accompanied with field works of EEC, I am trying to leave their records on the web.

◆ Environmental Balance Sheet for Kids:

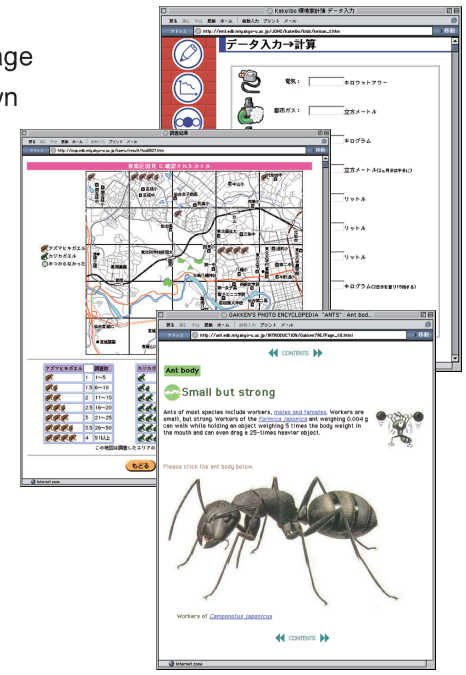
Estimating the CO_2 gas emissions from daily activities and learning opportunities to reduce emissions, save energy and money (pages in Japanese).

◆ Survey on Frogs in Sendai for Kids:

Surveying a familiar animal, frogs to encourage kids interests in environment. Results are shown realtime (pages in Japanese).

◆ Other Biological Database:

Plant Cis-acting Regulatory DNA Elements
Life Science Dictionary Project
Ant Image Database
Ant Kingdom, Photo Encyclopedia, Ants



Yossinoly SATTOW

My field of research:

computer science (and its border)

Aim:

finding and/or making rules or theories that:

- Something simple make itself more complicated, as a reflection of its environment (includes, sometimes a huge amount of, other resemblance)
- Somethings simple assemble, communicate, and cooperate to do something complicated by themselves, without external coodinators, interventers, and so on.

I called these activities "autonomous, decentralized, cooperative"(ADC) ones. Thus I have special interests in: cognitive science, developmental biology, linguistics (especially "Speach Act Theory" by John L. Austin), immunology, issues arround "complexity", nerve systems (point-to-point messaging) vs. internal secretional systems (broadcast messaging), etc, etc...

Most of my studies of these fields may end in my PRIVATE satisfaction of curiosities that NEVER contributes to my aim described above, but I believe that there exist a few (or, I hope, many) ideas and/or concepts that inspire me in such fields.

In a biological sense, interaction with nature is invaluable for human development, as it has been through the entire course of human evolution. From this point of view, we consider environmental education in nature necessary for young children, and thus emphasize studies to create the opportunities for them to learn in the wild. Environmental education is not “sustainable education”, for us, in this meaning.

On the other hand, we study how “sustainable education” should be correctly practiced as a strategy to promote nature conservation. As an example, we focus on the conflict arising between wild Japanese macaques and local communities in Sendai, providing various tactics for local people to understand the significance of wildlife conservation.

Field investigation is necessary to predict the earth environment of the 21st century. Aobayama, a well-preserved hill forest located about 5 kilometers west of the center of Sendai city, is one of our main fields for the practice of EE. Biodiversity in this area, including the EEC itself, is extremely rich (more than 1,000 species of wildlife are living in Aobayama).

By making use of the wonderful nature of the area, we are conducting (1) continuous investigation on the natural history of the field, (2) nature watching expeditions focused mainly on the young generation such as babies, children and students, and (3) biodiversity conservation in collaboration with several NGO's. We believe these kind of activities to be absolutely essential in promoting an understanding and appreciation of biodiversity and in identifying the significance of preserving biodiversity. The future of biodiversity is also the future of humanity.

Nature watching expedition in Aobayama.

【Project Research】

Propulsion of SNC-design in Kinkazan Island, Miyagi prefecture.

[2002 - 2005, Project Leader: Kosei IZAWA]

1. Basic research of fauna and flora

a) Continuous ecological and sociological studies of wild Japanese macaques (Macaca fuscata).
b) Continuous ecological and behavioral studies of wild Sika deers (Cervus nippon).
c) Continuous study of Avi-fauna.
d) Intensive survey of Odonati-fauna.
e) Intensive survey of cicadas.
f) Analysis of the ecological effects of wild Sika deer on ground beetles.
g) Investigation of the annual change of nut production.
h) Investigation of the annual change of seaweeds.

2. Preparation of teaching programs for EE (nature education)

a) The programs by age group.
b) The programs for each season.
c) The programs correspond to difference of hours or days of participants' stay.
d) Continuation-type programs and event-type programs.

3. Practice of nature education and its discussion

a) Questionnairing and research of description of children's impressions.
b) Direct observation of behavior.
c) Photographing for homepage and appraisal of it.

Chemical Investigation by Students in Marutazawa Pond.

Marutazawa Pond is one of the fields for relaxation in northern central Sendai City.

The disposal of solid dirty things is sometimes observed in this pond. This human action makes the water quality deteriorate. The effect of this action appears in water indexes such as chlorophyll, biochemical oxygen demand directly.

We investigate the water quality in all seasons. The results obtained in this study will be effective education materials which may modify human behavior toward the environment.

This project attempts to do (1) scientific researches clarifying original- and actual-status of natural environments (e.g., geology, landform, climate, vegetation and wildlife), (2) historical explorations clarifying traditional life-styles (e.g., wise-use of natural resources and recycle systems between environments and communities) and (3) construction of learning programs and teaching materials of the environmental education both for students and citizens (e.g., experiential studies, lectures, CD-ROMs and inter-net presentations), viewing from a local scale. At first, we focused on hilly ranges in Sendai Megalopolis Region, because of very sharp urbanization.