Atas perhatiannya dalam "WOKSHOP BAGI DOSEN DAN MAHASISWA TENTANG PEMELIHARAAN HERPETOFAUNA LANGKA (Monouria emys dan Heosemys spinosa) SEBAGAI SUMBER BELAJAR KONSERVASI EX SITU" pada tanggal 1 Desember 2008 di FKIP Universitas Bengkulu, sebagai pemakalah berjudul:

PEMELIHARAAN Monouria emys DAN Heosemys spinosa SEBAGAI SUMBER BELAJAR KONSERVASI EX SITU DI KEBUN BIOLOGI, UNIVERSITAS BENGKULU

Ketua Panitia,

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Mengetahui

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NIP: 131 999 153
PEMELIHARAAN HERPETOAUNA LANGKA (Monoura emys dan Heosemys spinosa) SEBAGAI SUMBER BELAJAR KONSERVASI EX SITU DI KEBUN BIOLIGI, UNIVERSITY BENGKULU

Olvin Aspar Rupeni

PENGEMBANGAN PROGRAM AJ</p>

B. Tujuan:
Kegiatan ini bertujuan:
(1) Menyiapkan final yang spesialisasi biologi mahasiswa atau guru dalam mempelajari hal-hal konservasi kura-kura secara ex situ.
(2) Mempunyai captive breeding bagi M. emys dan H. spinosa disetiap kampus Universitas Bengkulu.
(3) Memberikan pengetahuan yang mendalam bagi siswa SD, SMP, dan SMA sektoral dan sektoral Kura Bengkulu untuk mempelajari model cara konservasi kura-kura.

C. Metode (program kerja):
(1) Memanfaatkan kura-kura yang telah dihias oleh M. emys dan H. spinosa.
(2) Memasukkan nilai-nilai pemeliharaan bagi M. emys dan H. spinosa.
(3) Mengumpulkan dan memasukkan kegiatan pemeliharaan bagi M. emys dan H. spinosa di Kebun Biologi UNB.
(4) Menganalisis konservasi M. emys dan H. spinosa di Kebun Biologi UNB sebagai sumber belajar untuk masyarakat konservasi kura-kura.

C. Hasil yang telah dicapai (Februari 2009)
(1) Tersedia instalasi desa untuk pemeliharaan M. emys dan H. spinosa.
(2) Terkumpul emys dan H. spinosa.
(3) Berhadir untuk kuliah dan seminar mahasiswa Prodi Biologi dan sumber belajar bagi siswa
(4) Koloni H. spinosa menjadi sumber belajar bagi siswa

D. Kegiatan yang akan dibahas
(1) Memasukkan nilai-nilai kura-kura M. emys dan H. spinosa.
(2) Memasukkan nilai-nilai kura-kura M. emys dan H. spinosa.
(3) Menganalisis konservasi M. emys dan H. spinosa.
(4) Menganalisis konservasi M. emys dan H. spinosa.
(5) Menambahkan sumber dan pengetahuan untuk masyarakat konservasi kura-kura.
TERIMA KASIH!

Siaa kerja sama dengan Aniul untuk keberlanjutan program.

"PEMILIHARAAN HERPETOFAUNA LANDRA (Morelia eny dan Herpetonyx spinosa) SEBAGAI SUMBER BELAJAR KONSERVASI EX STU DI KEBUN BIOLÓG. UNIVERSITAS BENGKULU"
Heosemys spinosa AND Monouria emys

LIVE COLLECTION AS LEARNING RESOURCE FOR EX SITU
CONSERVATION AT THE BIOLOGICAL GARDEN OF
BENGKULU UNIVERSITY

Heosemys spinosa  Monouria emys

[Endangered (EN) on the IUCN Red List 2006]

by
Dr. Aceng Rayani

WORKSHOP BAGI DOSEN DAN MAHASISWA TENTANG PEMELIHARAAN
HERPETOFAUNA LANGKA SEBAGAI Sumber Belajar
KONSERVASI EX SITU

PROGRAM HIBAH KOMPETISI A2 (PHK-A2)
JURUSAN PENDIDIKAN MATEMATIKA DAN ILMU PENGETAHUAN ALAM
FAKULTAS KEGURUAN DAN ILMU PENDIDIKAN
UNIVERSITAS BENGKULU
2008
Heosemys spinosa AND Monouria emys
LIVE COLLECTION AS LEARNING RESOURCE FOR EX SITU CONSERVATION AT THE BIOLOGICAL GARDEN OF BENGKULU UNIVERSITY

M. emys

1. Summary

H. spinosa and M. emys populations in Bengkulu province, Indonesia, were sparse and fragmented into some small areas caused by monoculture plantation and transmigration program. Meanwhile our culture and policy of local government, in Bengkulu especially, have no enough support for turtle conservation action, therefore next years H. spinosa and M. emys status are possible to change from Endangered (EN) to Critically Endangered (CR). Based on the facts, captive care of H. spinosa and M. emys at Bengkulu University (UNIB) as learning resource for ex situ turtle conservation is absolutely necessary to realize. The project includes: (a) to complete an out door basic installation of care and breed area at the Biological Garden (BG) of UNIB, (b) to plant some species which could be used as the food of H. spinosa, and M. emys (c) to collect several H. spinosa, and M. emys from a district or sub district in Bengkulu province, (d) to care and manage several live collections of H. spinosa and M. emys at the BG of UNIB, and (e) to use the collections of H. spinosa and M. emys as learning resource for ex situ conservation. The project is multiyear activities, meanwhile within duration of 12 months hopefully it could be; (1) first hand experience for undergraduate students in learning the matter of ex situ turtle conservation, (2) initiating captive breeding of H. spinosa and M. emys at UNIB, (3) target of visiting for elementary, intermediate, and high school students in studying a model of conservation effort.

2. Background and conservation rationale

H. spinosa and M. emys are threatened by over harvesting and exploitation for the food or pet trade, compounded by habitat destruction. Some information revealed that H. spinosa and M. emys populations in Bengkulu province, Indonesia, are sparse and fragmented into some small areas caused by monoculture plantation and transmigration program. Despite the fact that majority people in Bengkulu did not use turtle for the food, because of its high market value makes some of them were interesting intensively to hunt and collect the reptile. H. spinosa and M. emys are relatively easy target for hunters and collectors, furthermore it should be noticed that their gained target never release back to the wild. Recently H. spinosa is rare species in Bengkulu and the animal is also classified as Endangered (EN) on the IUCN Red List 2006. Meanwhile our culture and policy of local government, in Bengkulu especially, have no enough support for turtle conservation action, therefore next years H. spinosa and M. emys status are possible to change from EN to Critically Endangered (CR).

Most reports concerning successful breeding and intensive study of the turtle came far from outside of Bengkulu. Asian Spiny Turtle first bred in captivity at Atlanta Zoo (Herman, 1993). Reality revealed that in Bengkulu up till now there is not any personal or institution that could work continuously for H. spinosa conservation. Our image about turtle conservation is uneconomic activity, and the image could only be corrected by an excellent planning of education program. It is wide-accepted that turtle conservation program should not only to intend on biological aspects, but it must also be anticipated by intensive socialization, promotion, and education. The turtle education program can be supplemented in succession into the remain effective curriculum on elementary, intermediate, and high school which in implementation using general principals of teaching-learning processes such as first hand experience in natural science education. In this context, Department of Biological Education, UNIB, of course, has a responsibility to prepare an excellent learning resource for undergraduate students concerning the matter of turtle conservation in side of the campus.

As mentioned above indicated that captive care of H. spinosa and M. emys at UNIB as learning resource for ex situ turtle conservation is absolutely necessary to realize. After completing the project hopefully it could be; (1) first hand experience for undergraduate students in learning the matter of ex situ turtle conservation.
students in learning the matter of ex situ turtle conservation, (b) initiating captive breeding of *H. spinosa* and *M. emys* at UNIB, (c) target of visiting for elementary, intermediate, and high school students from around of Bengkulu City especially in studying a model of conservation effort. Furthermore, out come of the project is to improve capacity building of the Bengkulu local government to participate in turtle conservation program.

3. Specific methodology

In general the project is multyear activities, meanwhile within a period of one year (12 months) will be carried out in six successive steps:

a. To complete the out door basic installation of care and breed area at the BG of UNIB

We would like to state here that Department of Biological Education, UNIB, received the PHK (Program Hibah Kompetisi) A-2 grant from RI government for developing Biological Garden (BG) within the period of three years (2006-2008). The grant is aimed to improve the quality of undergraduate student research using live biological material collections in side of the campus. Furthermore the BG is planned as the area for teaching-learning resource and laboratory of conservationists including to initiate ex situ turtle conservation action.

Fig 1. Undergraduate students used some collections at the BG of UNIB as source of learning (left). Location of the out door basic installation of breeding area supported by the PHK A-2 project which will be completed to care and manage several live collections of *H. spinosa* (right).

b. To plant some species that could be used as the food of *H. spinosa* and *M. emys*

According to our experience during two years to care several *H. spinosa* at a personal area and some reports indicated that the spine turtle is herbivorous (Herman, 1993; Gurley, 2003). Some species such as *Musa paradisiaca*, *Phaseolus vulgaris*, *Colocasia esculenta*, and *Carica papaya* could be used as the food of the animal. These species will be planted at near around of the BG.

c. To collect *H. spinosa* from some districts in Bengkulu province.

Local hunters, local traders, and middleman whom were participating on the turtle’s distribution process in Bengkulu province will be viewed as partnerships to collect a limited number of *H. spinosa*. The first priority of spiny turtle collection is the reptile which carapace lengths are between 82 and 102 mm, and then the sex ratio is one male and two females (Herman, 1992).

d. To care and manage several live collections of *H. spinosa* at the BG of UNIB.

The gained live collections of *H. spinosa* and *M. emys* will be cared and managed at the BG of UNIB in accordance with some published recommendations (Herman, 1993; Gurley, 2003). Furthermore share competency and technical assistance with some overseas institutions (such as Zoo Atlanta, the Vietnam-based Asian Turtle Program, and Coc
Asian Spiny Turtle (Hemimerys spinosa) live

Phuoc National Park) are really necessary in developing the similar activity. Therefore, we would like to make both direct and indirect correspondence (see an acceptance letter from Douglas Hendrie, Vietnam), and then if it is possible to generate a memorandum of understanding (MOU) with the overseas institutions.

e. To use live collections of *H. spinosa* and *M. emys* at the BG of UNIB as learning resource for *ex situ* turtle conservation.

The second goal as mentioned on the d step is to use several live collections of *H. spinosa* at the BG of UNIB as learning resource for *ex situ* turtle conservation. It is wide-accepted that turtle conservation program should not only to intend on biological aspects, but it must also be anticipated by intensive socialization, promotion, and education. The turtle education program can be supplemented in succession into the remain effective curriculum on elementary, intermediate, and high school which in implementation using general principals of teaching-learning processes such as first hand experience in natural science education.

The live collections of *H. spinosa* and *M. emys* will be used in both theory and practice of taxonomy, physiology, etiology, development, and genetics lectures at Department of Biological Education, UNIB. Up till now (June 2008) ten undergraduate students of the department studied more both biological and educational aspects of turtle as subject matter of their thesis (see list of undergraduate thesis).

4. Project deliverables anticipated

As stated previously that the project is non-commercial multiyear activities which are required sustainable supports from both relevant local and international institutions. PHK A-2 funding will be used to complete the basic installation of breeding area at the BG of UNIB, meanwhile financial support for the next five steps are requested from The TSA. Furthermore the project should be anticipated by some supports from the team leaders of UNIB and the local government of Bengkulu province.

5. General timetable

The project is multiyear activities, meanwhile within a period of one year (12 months) will be carried out in six successive steps. The schedule can be obtained below:

<table>
<thead>
<tr>
<th>No</th>
<th>Activity</th>
<th>Month</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>To complete the basic installation of breeding area at the BG of UNIB</td>
<td>1 2</td>
</tr>
<tr>
<td>2</td>
<td>To plant some which could be used as food of <em>H. spinosa</em> and <em>M. emys</em></td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>To collect several live specimens of <em>H. spinosa</em> and <em>M. emys</em> om districts in Bengkulu province.</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>To care and manage several live collections of <em>H. spinosa</em> and <em>M. emys</em> at the BG of UNIB (multiyear; to be continue)</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>To use several live collections of <em>H. spinosa</em> and <em>M. emys</em> at the BG of UNIB as learning resource for <em>ex situ</em> turtle conservation (multiyear; to be continue).</td>
<td>6</td>
</tr>
<tr>
<td>6</td>
<td>Report</td>
<td>7</td>
</tr>
</tbody>
</table>
6. Literature cited


ALBUM FOTO

WORKSHOP BAGI DOSEN DAN MAHASISWA TENTANG PEMELIHARAAN HERPETOFAUNA LANGKA SEBAGAI SUMBER BELAJAR KONSERVASI EX SITU

PROGRAM HIBAH KOMPETISI A2 (PHK-A2)
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