BIOS COLLECTION and EXPERIMENTAL ETHICS POLICY (CEEP) AND ACKNOWLEDGEMENT

All BIOS staff and visitors are to be familiar with and abide by the BIOS CEEP
This document is excerpted from the full CEEP policy to provide a simpler version for Visiting Academic Groups. Group leaders must be familiar with and abide by the policy and ensure the group does as well. This form must be signed by the group leader (for the group) and returned to BIOS with registration forms. The group leader is responsible for obeying/enforcing the *Collection and Experimental Ethics Policy* for their group.

If collecting is planned, electronic communications of completed forms is requested at least one month prior to arrival. If NO collecting is planned, this signed form may be returned upon check in.

For supplementary information and documents please visit:
http://www.bios.edu/visiting-bios/visiting-group-and-student-forms/
or
http://www.bios.edu/visiting-bios/visiting-scientist-forms/

Please sign a copy of this form, for yourself and/or on behalf of your group, and return it to BIOS along with your registration form.

I have read the CEEP document and agree, on behalf of my visiting group, to be in compliance with it. Our group WILL NOT be doing collecting of ANY kind.

Name of group _____

Group leader's name _____

Signature _____ Date _____

BIOS COLLECTION AND EXPERIMENTAL ETHICS POLICY (CEEP)
GENERAL OVERVIEW

The Bermuda Institute of Ocean Sciences (BIOS) has a deep respect for the natural environment of Bermuda and is dedicated to its preservation. BIOS does not sanction collecting for any purpose other than research or education (i.e., recreational collecting is not permitted), within the confines of Bermuda Government policies/laws. The following represents an overview of the BIOS *Collection and Experimental Ethics Policy (CEEP)*. Collection for commercial purposes is expressly prohibited without permission from the Bermuda Government.

If you wish to engage in research and education activities at BIOS, you are required to fill out forms describing your intended collecting and experimental activities. Visiting groups should also be as detailed as possible on their activities forms. You will have to submit these forms prior to arrival. For more information, please see http://www.bios.edu/visiting-bios/visiting-scientist-forms/

To fill out the forms you will need to understand terms such as “Limited Impact Research (LIR)” and “Approved Collecting Experiment.” While at BIOS you may, at any time, be asked to explain/justify your activities to the *Collection and Experimental Ethics Committee* and show your *Collection and Experimental Manipulation Form*. You will need to have recorded any collection you have done, and be able to document the fate of all organisms collected. If you wish to export any organisms you will need to apply for a Bermuda Government export permit (and maybe even a CITES permit).

The over-arching philosophy for visiting groups, and especially those with younger students, is to maximize field observations and minimize collecting. Whenever possible, group leaders are used to design programs that will cause the minimum environmental impact. Suggestions for such program elements are given in the following section. However, if collection and experimentation is required, please follow basic guidelines below.

BIOS COLLECTION AND EXPERIMENTAL ETHICS POLICY (CEEP)
VISITING ACADEMIC GROUPS

- Under Bermuda law, some species are completely protected and cannot be collected for any reason without a special government permit. Protected species include, but are not limited to:
    - The spiny, or Bermuda, lobster
    - Many shelled mollusks, including the calico clam, ziggy scallop and West Indian Top Snail (there is a $5000 fine for collecting top snails/shells)
    - All corals
    - Others listed at http://www.bermuda-online.org/fauna.htm
- Some marine and terrestrial sites, as well as Bermuda's caves, are protected. Do not, under any circumstance, disturb these sites.
    - Whalebone Bay is considered a protected area by BIOS because it is used so frequently for our field trips. Please do not collect specimens from this area or disturb the habitat.

If collecting and/or field experiments are required as an integral part of the educational program, a *Planned Collection and Experimental Manipulation Form* (hereafter referred to as the *Planned Form*) must be submitted at least *1 month* prior to the group's arrival at BIOS. This should be done electronically by visiting: http://www.bios.edu/uploads/BIOS_CEEP_planned_realized_fillable.pdf. The *Planned Form* is the main mechanism by which BIOS assesses whether a group's proposed activities are consistent with the CEEP.

All collecting and manipulative work conducted by visiting groups is to be conducted under that is termed *Limited Impact Research (LIR).* The guideline is that collecting for education is restricted to **one or two specimens per species** (not including phytoplankton, zooplankton, and other microscopic organisms in marine waters). For more information please visit: http://www.bios.edu/uploads/BIOS-Collection-and-Experimental-Ethics-Policy.pdf

The group leader must convert their *Planned Form* to a *Realized Collected and Experimental Manipulation Form (*hereafter referred to as the *Realized Form*) and submit a signed copy to Lab Operations prior to departure from BIOS. The *Realized Form* is the main mechanism by which BIOS accounts for removal of organisms from the marine environment. As such, all activities of all Visiting Groups will be closely scrutinized with respect to timely submission of these documents.

- Live organisms are to be returned to their original habitat when observations are complete.
- Remains of non-survivors should be added to the Ferry Reach detrital pool.
- If you plan to request to take specimens back with you for bona fide research, submit the appropriate form to BIOS Lab Operations (Bruce Williams, Bruce.Williams@bios.edu) so that required permits can be secured by BIOS from the Bermuda Department of Agriculture and Fisheries. We request that you contact us at least two months before your arrival if such a permit is required.

Suggestions for Minimizing the Environmental Impact of Educational Programs:

The following notes are guidelines amalgamated from various successful programs. Some of these ideas should be useful in helping minimize our impact and maintain compliance with Bermuda Government policy.

- Make observations *in situ* rather than collecting. Underwater slates are excellent, inexpensive tools for this, and can lead to the development of observations and scientific drawing skills. Check out the book *Keeping a Nature Journal* for ideas.
- Photo-document rather than collect specimens. This is a great additional exercise and an excellent complement to a species list. Some teachers have created a cross-curricular IT exercise using a database by having students create their own species list with digital pictures, taxonomic classification, and a general description.
- Restoration projects: we encourage groups to participate in woodland restoration projects at Ferry Reach and Coopers Island. These ongoing efforts require lots of willing workers and provide excellent illustration of threats to oceanic islands and the concept of endemic flora and fauna.
- Intertidal surveys: students armed with only slates and an ID guide can gather a large amount of useful data on invertebrates on the rocky shore. Several species in this zone are in decline and observational data can be very useful in monitoring them.
- Remind student to avoid touching corals entirely and to limit handling of invertebrates. Encourage students to return inter-tidal rocks to their original locations after making observations.