

SIMON FRASER UNIVERSITY

S.78-11

MEMORANDUM

To Senate

From J.M. Webster

Dean of Science

Subject Use of Special Topics Courses 77-2
- For Information

Date November 23, 1977

In accordance with the motion passed at the Senate meeting of November 5, 1974, regarding the use of special topics courses, the following is a report from the Faculty of Science.

Biological Sciences

BISC 471 - Biology of Molluscs

Vector: 0-0-0

Course description: An advanced course of selected topics on the morphology, physiology, systematics and ecology of the Mollusca.

Prerequisites: Advanced Standing in Invertebrate Biology.

Professor: Dr. J. McInerney

Enrollment: 2 students.

Note: This course was offered at various three week intervals at the Bamfield Marine Station on Vancouver Island.

Course outline: none given.

BISC 472 - Biology of Marine Birds

Vector: 0-0-0

Course description: A study of the adaptations of birds to the marine environment.

Prerequisites: Introductory Vertebrate Zoology

Professor: Dr. J. McInerney

Enrollment: 4 students.

Note: This course was offered at the Bamfield Marine Station on Vancouver Island. It is a three-week course.

Course outline: Lectures will emphasize the systematics and ecological relationships, behaviour, life histories and conservation of seabirds. Field methods and census techniques will comprise the field-laboratory segment of the course.

BISC 473 - Pollen Studies

Vector: 0-0-0

Course description: none given.

Prerequisites: none given.

Supervisor: Dr. R.W. Mathewes

Enrollment: 1 student.

Course outline: none given.

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BISC 473 - Predation Studies

Vector: 0-0-0

Course description: none given

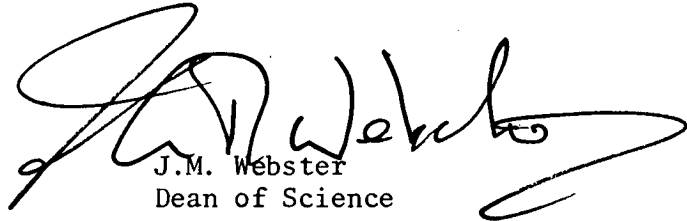
Prerequisites: none given

Supervisor: Dr. B.E. Hartwick

Enrollment: 1 student

Course outline: none given.

I have been advised that the Departments of Chemistry, Mathematics and Physics did not offer special topics courses during the Summer Semester 1977.



J.M. Webster
Dean of Science

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..... Dean of Science

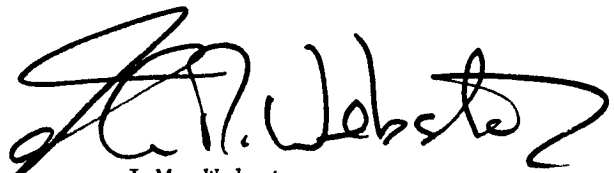
Subject..... Use of Special Topics Courses - 77-2

Date..... November 28, 1977

Further to my memorandum of November 23, 1977, I enclose additional information on the following courses:

BISC 473 - Pollen Studies

BISC 473 - Predation Studies.



J.M. Webster
Dean of Science

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Enclosures

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POLLEN STUDIES

Instructor: Dr. R.W. Mathewe

This course is designed to cover the principles of pollen analysis, with emphasis on the theoretical basis of pollen production, identification, dispersal, and preservation in Pleistocene sediments, and the reconstruction of past environments from postglacial sediment cores.

Text: Faegri, K. and Johs. Iversen (1974). Textbook of Pollen Analysis. Blackwells, Oxford.

Selected papers were submitted to the student for critical reading throughout the semester.

PREDATION STUDIES

Instructor: Dr. B. Hartwick

This course includes assigned readings in general theory of predation with emphasis on quantitative analysis and experimentation. Reading assignments will be followed by an in-depth study of some aspect of the predation process.

READING LIST

- Bonar, L., 1936. An unusual ascomycete in the shells of marine animals. University of California Publications in Botany 19: 187-192.
- Connell, J., 1970. A predator-prey system in the marine intertidal region: I. Balanus glandula and several predatory species of Thais. Ecological Monographs 31: 49-78.
- Curio E. 1976. The ethology of predation. Springer-Verlag.
- Giesel, J., 1969. Factors influencing the growth and relative growth of Acmaea digitalis, a limpet. Ecology 50: 1084-87.
- Giesel, J., 1970. On the maintenance of a shell pattern and behavior polymorphism in Acmaea digitalis, a limpet. Evolution 24: 98-119.
- Hartwick, B., 1976. Foraging strategy of the Black Oyster Catcher (Haematopus bachmani). Canadian Journal of Zoology 54: 142-155.
- Hartwick, B., 1977. Some observations on foraging by Black Oyster Catcher (Haematopus bachmani). unpublished.
- Hassel, M.P., 1976. Arthropod Predator - Prey Systems. In Theoretical Ecology ed. R. May.
- Hassel, M.P., J. H. Lawton and J. R. Beddington. 1976. The components of arthropod predation I. The prey death rate
II. The predator rate of increase
J. Anim. Ecol. 45.
- Hassel, M. P. The dynamics of competition and predation. Edward Arnold pub.
- Holling C.S. 1959. The components of predation as revealed by a study of small mammal predation of the European Pine Sawfly. Can. Ent.

- Kettlewell, H., 1955. Recognition of the appropriate background colors by the pale and black phase of Lepidoptera. Nature 175: 943-944.
- Lewis, J., & Bowman, R. 1975. Local habitat-induced variations in the population dynamics of Patella vulgata L.. Journal of Experimental Marine Biological Ecology 17: 165-203.
- Paine, R., 1969. The Pisaster-Tegula interaction: prey patches, predator food preference, and intertidal community structure. Ecology 30: 950-961.
- Paine, R., 1971. Energy flow in a natural population of the herbivorous gastropod Tegula finebralis. Limnological Oceanography 16: 86-98.
- Ricketts, E. & Calvin, J., 1968. Between Pacific Tides. Stanford University Press, Stanford.
- Test, A., 1945. Ecology of California Acmaea. Ecology 26: 379-405.
- Vermeij, G. 1972. Intraspecific shore-level gradients in intertidal molluscs. Ecology 53: 693-700.
- Vermeij, G., 1973. Morphological patterns in high intertidal gastropods: Adaptive strategies and their limitations. Veliger 16: 319-346.
- Wolcott, T., 1973. Physiological ecology and intertidal zonation in limpets (Acmaea): a critical look at limiting factors. Biological Bulletin 145: 389-422.
- Stimson, J. & Black, R., 1975. Field experiments on population regions in intertidal limpets of the genus Acmaea. Oecologia 18: 111-120.