HIMALAYAN FOREST RESEARCH INSTITUTE (HFRI), SHIMLA

NEW RESEARCH PROJECTS (PLAN) OF HFRI INITIATED DURING 2010 -2011

S. No.	Title of the Research Projects	Name of the PI	Thrust Area	Current Status
1.	Management of insect-pests and pathogens of seeds of *Pinus gerardiana* Wall. in storage. 2 years (April, 2010)	Dr. Pawan Kumar, Scientists-B	Forest Protection (Insect-pests, diseases and control)	Chilgoza seeds which are economically important are heavily infected by both insect borer and pathogens. The seed borer identified as *Cateremna tuberculosa* Meyrick is reported for the first time infesting the seeds. During the present investigations, the seeds have been procured from the local farmers during October, 2010 and previous year seeds have also been kept for investigations. The seeds have been kept in different containers such as Cotton bag, paper bag, Gunny bag, and airtight containers for observations. Different concentrations of Neem based pesticides, safer chemicals have also been analyzed to test the control of insect pests and pathogens during storage. Freezing treatments are also being tested for the protection of seeds against the effect of seed borer as well as pathogens. CRD (Complete Randomized Design) was used to carry out the experiments in lab. The study on different methods such as size of Containers, freezing treatments, and pesticides will help in assessing the preliminary impact of these techniques in controlling the insect pests and pathogens of Chilgoza seeds during storage.
2.	Study on the influence of climate on bionomics of *Pityogenes scitus* blankford (Coleoptera:Scolytidae) in Himachal Pradesh. 5 years (April, 2010)	Dr. Ranjeet Singh, Scientist-E	Forest Protection (Insect-pests, diseases and control)	Study sites at different altitudinal zones in Himachal Pradesh viz. D-91, Bhawan Ki Dhar (Solan), D-73 Mashobra (Simmla), Jamunda Forest (Kotgarh), Jangi Forest (Kinnaur) has been selected after intensive survey with the active support of State Forest Department, HP. Two days training on 14th and 15th October, 2010 to the front line staff of these sites on "Collection, Preservation and Studying of Coleopteran Insects" affecting Forest in Himachal Pradesh hadbeen provided. Mass culturing of *P. scitus* in the laboratory to study the life history is being carried out.

3.	Predatory efficiency of *Stegodyphus sarasinorum* Karsch (Arachnida: Araneae: Eresidae) against insect pests of plants in the forest nursery. 3 years (April, 2010)	Dr. S. Chakrabarti, Scientist-E	Forest Protection (Insect-pests, diseases and control)	So far 4 field survey were conducted in the lower hill and mid-hill regions of Himachal Pradesh. 23 different spots were screened in search of social spider nest and only in 10 spots colony of the spider were recorded. These areas are Nogli, Gesipul, (Rampur), Sunni, Basantpur, Arki, Gablog, Bangora, Dadhau, Renuka, Kunj-Kayer. 15 trees and shrubs were recorded as the host tree where the spider constructed their nest. These include: *Mallotus philippensis, Artemeshia sp., Lagerstroemia sp., Curessus sp., Platycladus orientalis, Kigelia pinnata, , Prunus dulcis, Prunus domestica, Dalbergia sisso, Eucalyptus sp., Zyzyphus jujube, Phyllostachys sp., Callistemon viminalis, Acacia catechu, Punica granatum,* 1 undetected. 6 mature colony nest and two initial nests were collected for laboratory studies. Nest size and trap-web dimensions were measured. The structure of the nests were studied as well as spiders present in the nests were counted. Insects and other arthropods which were trapped in the nest were removed and were segregated for further study. Detail behavioral study on the predatory behavior of the social spider were conducted and recorded in video format. More surveys would be conducted and all altitudinal regions would be screened for locating social spider nests and selecting suitable spots for laying out experiments. Identification of trapped insects would be done when more collections are accumulated and those would be segregated in to three different groups, as pest-insects, non-pest insects, non-insect arthropods.