



REPORT

THE ZOOLOGY DEPARTMENT

“Workshop on Aquaculture & Melissopalynological Studies of Honey”

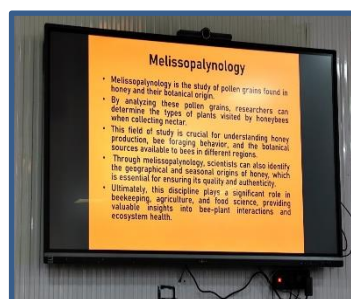
Date: 7th December 2024

Venue: Conference Hall



The Zoology Department of C.O.E. Govt. Degree College Sanjauli organized a **Workshop on Aquaculture & Melissopalynological Studies of Honey**. The event started with the welcome of the hon'ble speakers and the faculty members of the zoology department in the *conference hall* of Centre Of Excellence Govt. College Sanjauli. Principal of the college *Prof. Bharti Bhagra* presided the event. Dr. Minakshi Sharma (*HOD Sciences*) delivered the welcome speech in the presence of around 100 students of Life Science section. 10 students each from St. Bedes, RKMV and Govt. College Kotshera attended the workshop. The event took part in 2 sessions; first session included guest lectures by **Dr. H.S. Banyal and Prof. Shiwani Seraik**.

The first speaker of the day was **Prof. Shiwani Seraik** and she presented her presentation on the topic **Melissopalynology & Physiochemical Analysis of Honey**.



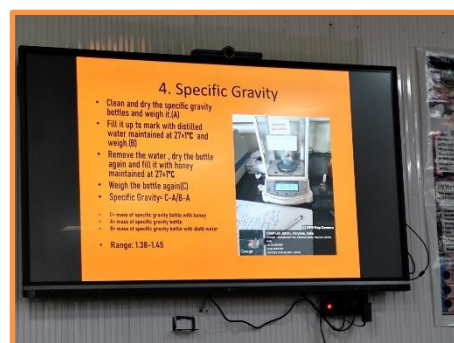
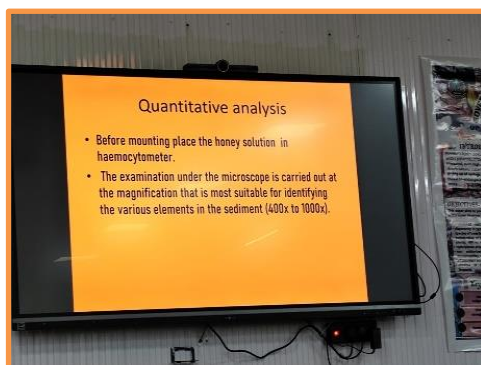
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In their presentation Prof. Shiwani started with the basics and discussed and elaborated about the various important aspects of honey, various species of honey bees, their pasturage etc. the presentation also discussed various uses of honey bee products such as honey, bee pollen, royal jelly, apitoxin and beeswax.



The section of presentation dealing with the concept of “Melissopalynology” dealt with the discussion and preparation of pollen slides from honey samples, the quantitative analysis of honey and the significance of the whole process. The last few parts of the presentation shed light on the “Physiochemical Analysis of Honey” and aspects such as ph, moisture, specific gravity and HMF & Fiehe’s Test were discussed.



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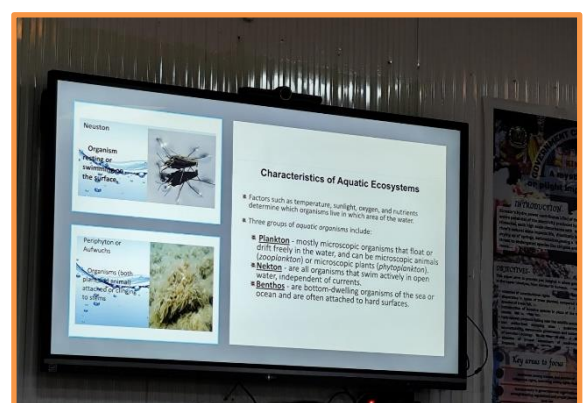
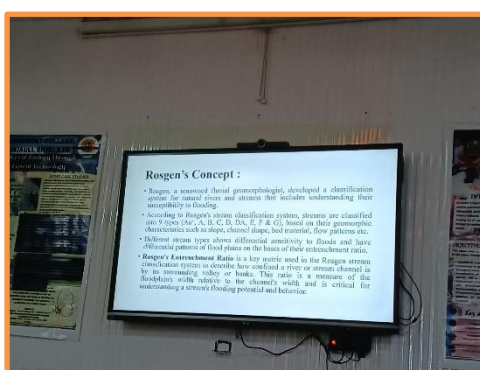
Students of other colleges were then invited to have a look on the posters presented by the students of the Zoology department.



After the poster presentation the second guest speaker **Dr. Harinder Singh Banyal, Associate Prof. & Chairperson Dept. Of Bio Sciences, H.P.U.** presented his presentation on the topic **“A perspective on environmental changes faced by fish faunal diversity in the lotic water bodies of Himachal Pradesh.”**



Dr. Banyal started with the basic concepts such as the description of an aquatic system and its functions, he also *discussed various groups of aquatic organisms such as: planktons, nektons and benthos*, further covering concepts like *types of aquatic ecosystems, Rosgen's concept, flood plains and functions etc.*

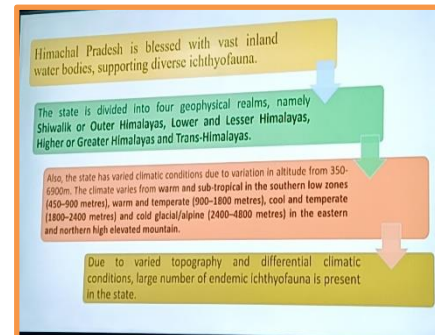


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Dr. Banyal emphasised on conservation of aquatic fauna and its importance in the mountainous regions of the Western Himalayas, especially in the state of Himachal Pradesh.



Dr. Banyal was then invited to have look at The poster presentation of the students of Zoology department.



Dr. Shweta and Dr. Minakshi of Zoology Department then gave their vote of thanks, and the seminar ended with the national anthem.



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List of students from RKMV:-

RAJKIYA KANYA MAHAVIDYALAYA (RKMV), SHIMLA-1
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EDN-RKMV-(1) Estt./2023-24
Dated Shimla-171001 the 06-12-2024

OFFICE ORDER

In reference to mail received from Center of Excellence, Govt. College Sanjauli, Shimla-06 Dated 03-012-2024. The following students are deputed to attend one day workshop on 07-12-2024 under DBT Star College Scheme to Center of Excellence, Govt. College Sanjauli, Shimla-06.

1. Neelam BSc-III
2. Nikita BSc-III
3. Sonam Dekid BSc-III
4. Renuka Sharma BSc-II

o/c

Principal
RKMV Shimla-1.
R.K.M.V., Shimla
06-12-2024

Principal
RKMV Shimla-1.
Principal
R.K.M.V., Shimla

Endst. No Even Dated Shimla-1 the

1. The Principal, Center of Excellence, Govt. College Sanjauli, Shimla-06. for information.
2. Individual concerned.

संजौली कालेज में हुआ कार्यशाला का आयोजन

शिमला, 7 दिसम्बर (ब्यूरो): संजौली कालेज में जीव विज्ञान विभाग की ओर से एकदिवसीय स्टार डी.बी.टी. स्कीम के तहत कार्यशाला का आयोजन किया गया। इसमें शहर के स्थानीय कालेजों आर.के.एम.वी., सेंट बीडस कालेज की छात्राओं ने भाग लिया। कार्यशाला का शुभारंभ कालेज की प्राचार्य प्रो. भारती भागड़ा ने दीप प्रज्वलित कर किया।

इस दौरान विभागाध्यक्ष डा. मीनाक्षी शर्मा द्वारा कार्यशाला की रूपरेखा प्रस्तुत की गई। उसके बाद प्रदेश वि.वि. से जीव विभाग के चेयरमैन डा. हरिंदर सिंह बनियाल ने जीव विज्ञान को लेकर अपना व्याख्यान दिया। प्रो. शिवानी कपरेट द्वारा शहद की शुद्धता जांचने पर छात्रों को विशेष तौर से जानकारी प्रदान की गई।

इस कार्यशाला में महाविद्यालय के छात्रों सिद्धांत रिचा, अतुल अर्पिता, स्वप्निल, श्रेया द्वारा पोस्टर प्रदर्शित किए गए। इस मौके पर डा. श्वेता शर्मा, डा. हिमानी सक्सेना डा. रीना चन्देल, डा. कीर्ति सिंघा, प्रो सरला व प्रो. शिखा आदि मौजूद रहे।

संजौली कालेज में बताए शहद की औषधीय महत्त्व



शिमला। सेंटर ऑफ एक्सीलेंस संजौली कालेज में शनिवार को जीव विज्ञान विभाग द्वारा एकदिवसीय कार्यशाला का आयोजन स्टार डीबीटी स्कीम के तहत किया गया। इसमें लगभग 200 बीएससी मेडिकल के छात्र-छात्राओं ने भाग लिया। इसमें आरकेएमवी, सेंट बीडस कालेज के छात्र भी शामिल हुए। कार्यशाला का शुभारंभ कालेज की प्रचार्या प्रो. भारती भागड़ा द्वारा दीप प्रज्वलित कर किया गया।

विभागाध्यक्ष डाक्टर मीनाक्षी शर्मा द्वारा कार्यशाला की रूपरेखा सांझी की गई। इस कार्यशाला में चेयरमैन बायोसाइंस विभाग, एचपीय के डा. हरिंदर सिंह बनियाल ने चैलेंज टू फीश डायवर्सिटी इन एचपी रिवर्स पर व्याख्यान दिया। प्रो. शिवानी कपरेट द्वारा शहद की शुद्धता जांचने पर छात्रों को जानकारी दी गई और शहद और उसकी औषधीय महत्त्व के बारे में जानकारी दी गई। इस कार्यशाला में कालेज के छात्रों सिद्धांत, रिया, अतुल, अर्पिता, स्वप्निल, श्रेया द्वारा पोस्टर प्रदर्शित किए गए। डा. श्वेता शर्मा द्वारा सभी का धन्यवाद किया गया। इस मौके पर डाक्टर हिमानी सक्सेना डा. रीना चंदेल, डा. कीर्ति सिंघा, प्रो. सरला, प्रो. शिखा मौजूद रहे

REPORT

HANDS ON TRAINING ON MELISSOPALYNOLOGICAL STUDIES OF HONEY

Date :- 7th December 2024

Venue:- Zoology Lab

The Zoology Department of C.O.E. Govt. Degree College, Sanjauli organised a one day hands on training for the students on the topic “Melissopalynological Studies of Honey” in which students from different colleges also participated. Dr Shivani Seraik Kaprate was the resource person.



(A)PHYSICOCHEMICAL ANALYSIS

1)Colour :-

- Colour was determined by recording the optical density of honey without dilution.
- 10gm of honey was taken in test tube, placed in water bath at 77 Degree Celsius for removal of air bubbles and cooled at room temperature. By using distilled water as blank, absorbance was read in spectronic 20 at 520nm.



2)pH :-

- The pH of the honey was measured by dissolving 10gm honey in 100ml distilled water using pH meter.
- Observed pH is 4.34.
- Range :- pH is 3.9-6.1



3)Moisture :-

- The moisture content was calculated by measuring the refractive index of the sample at 20 degree Celsius by digital refractrometer.
- Observed moisture is 20.6%.
- Range :- 16-25%



4) Specific Gravity :-

- Clean and dry the specific gravity bottles and weigh it (A).
- Fill it up to the mark with distilled water maintained at 27.1 degree Celsius and weigh (B).
- Remove the water, dry the bottle again and fill it with honey maintained at 27.1 degree Celsius.
- Weigh the bottle again (C).
- Specific gravity = $\frac{C-A}{B-A}$
- Range = 1.38-1.45



5) Electrical Conductivity :-

- Take 20gm of honey in 100ml of distilled water. Take 40 ml of this 20% solution in a beaker and measure the electrical conductance.
- Honey electrical conductance will be measured by conductivity meter.
- Observed conductance is 0.38 mS/cm.
- Range :- less than 0.8 mS/cm.



6) Fiehe's Test :-

- Fiehe's test is a qualitative reaction performed to detect the presence of hydroxymethylfurfural in which in which the presence of HMF is confirmed with the appearance of cherry red colour with resorcinol.
- In the positive test, the cherry red colour persists, while in negative reaction there is appearance of light pink colour which disappears after a short time.

Procedure:-

- Take 5gm of honey sample in a porcelain dish. Add to this 10 ml of diethylether and stir with a glass rod for 30 seconds. Put this in another porcelain dish and

repeat it thrice. Let it dry for 2-3 hrs. Add 2-3 drops of resorcinol with concentrated HCl.



(B) PREPARATION OF POLLEN SLIDES FROM HONEY SAMPLES

Honey slides will be prepared for analysis using the method proposed by Louveaux *et al* (1978).

Procedure :-

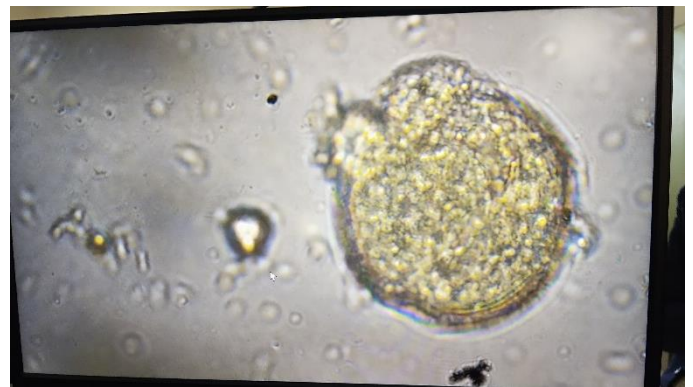
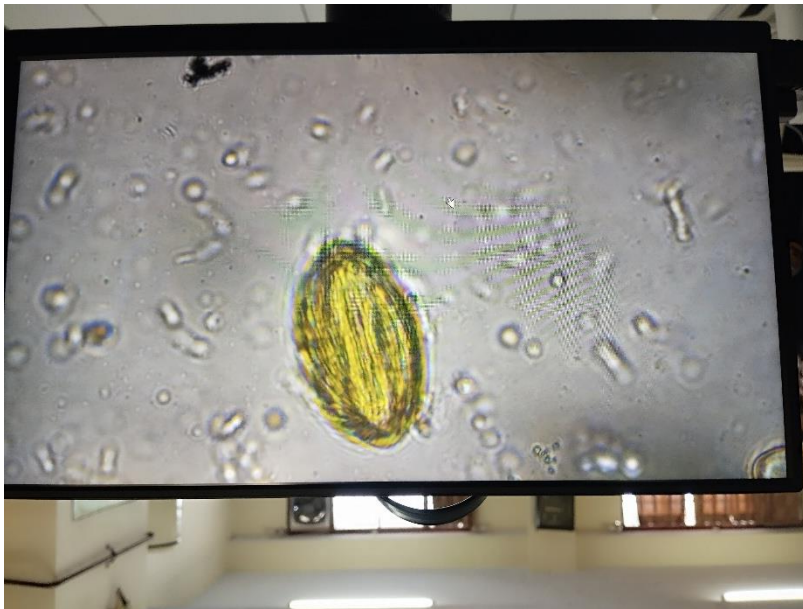
10gm of honey will be dissolved in 20 ml of hot distilled water at 40 degree Celsius.

centrifugated at 2500-3000 rpm for 10 minutes.

Supernatant liquid is discarded.

Sediment will be dispersed again transferred to another centrifuge tube

Centrifuged again for ten minutes at 3000 rpm and sediment will be separated



Observe under the microscope

From this we conclude that more the number of pollens present in the honey more is the purity of the honey.