

From,
K. Vedham,
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50th Street,
K.K. Nagar,
Madras - 600 078.

25.6.1993

To,
Dr.N.V. Joshi,
Centre for Ecological Sciences,
Indian Institute of Science,
Bangalore - 560 012.

Dear Sir,

My sincere regards to you. As I had discussed with you in February regarding your assistance in analysing my data on population dynamics of the grasshoppers, I would like to inform you that I am planning to come to your lab by mid-July (around 20th), provided you can afford to spare sometime for my work. If my arrival has to be adjusted, please do inform me about your availability. I would bring along whatever literature I have on population models (in grasshoppers). Please do mention if I have to provide you with anything else, also and the approximate duration I have to stay to finish the analyses. I am planning to submit my thesis by first week of October and so I wish to finish this part by end of July or early August. I would be very much grateful to you, if you could help me in this regard. Awaiting your reply at the earliest.

Thanking You,

Sincerely yours,

K. Vedh

8-7-93
K. VEDHAM

To,

Dr. N. V. JOSHI,
CENTRE FOR ECOLOGICAL SCIENCES,
INDIAN INSTITUTE OF SCIENCE,
BANGALORE - 560 012.

Dear Sir,

Received your letter and noted the contents. It was very unthoughtful on my part to have not given you the details of the data I have collected and things I want to do with them. I apologize to you on this lapse on my part. As you know of my limited knowledge of Maths, I am giving a write-up of whatever I have in mind. I am just trying to brush up and learn more of Calculus and Statistics. I met Dr. Ranjit Daniels few days back and he gave me two books on population studies, so that it will help me to handle few things atleast, when I come over to IISc for your guidance in population data analyses.

August third week is absolutely fine for me. It all, of course, has to be based on your availability, as I

have told you in person, and in the letter also. You can suggest the exact date, you want me to be there. As for accomodation, I suppose, I can take care of it. In case, I need help from you for campus accomodation, I will definitely contact you and well in advance. As regards to TA & DA, I am not very particular about them. IF at all you could organize for them, without wasting your precious time, I would take it; but my primary objective is to come and complete my work there successfully and so, it does not really matter whether I get any financial assistance or not. I can manage without TA & DA, also.

I sincerely thank you for taking so much efforts to help me out and I promise to live up to it.
With regards.

Thanking you,

Sincerely yours,

K. Veda

P.S: I am enclosing the write-up along with this letter.

(i) Using Sweep-net technique, population of Diablocatantops pinguis (Walker) was randomly sampled, on a weekly basis, for a 3-year period. Area covered thus, was about 50 m². The weekly data have been accounted on a monthly ~~dat~~ basis. Though I have data for six different places of Tamil Nadu, I feel, that I ~~to~~ will compare ^{the data of} just two localities - Tambaram and Chingleput. They are about 25 km apart (near Madras) and so, experience almost similar abiotic conditions. I will bring ^{the} ~~att~~ data of all six localities, anyway. The other four places were visited only once in a month and so, only monthly counts are available. ~~Even~~ ~~with~~ Abiotic factors considered for this study were - Temperature, Relative Humidity & Rainfall. Basic question I would wish to answer is, is there any significant individual and/or cumulative effects of abiotic factors on the population trend?

In addition, could this relationship be extrapolated to predict its trend for a given set of abiotic conditions - through a model?

One important thing I want to know from you is, are there any ~~bar~~ vital parts that I ought to know, which I haven't not so far, before I come there? Do let me

Know so that, I can do ~~so~~ accordingly.

(ii) ENERGETICS OF *D. pinguis* on four hosts:

Data on ^{amount of} food consumed, faeces egested and increase in insect's weight - on four host plants - from 1st instar to Adult stages were collected.

From this basic data, using the formula,

$$C = F + R + P,$$

Where, C is consumption, F is faeces excreted, P is production (tissue growth), and R is respiration, ~~the~~ ^I derive R , theoretically (other three are known & there is no access to respirometer to ~~to~~ determine R directly).

From these variables, ~~we~~ I also obtain ^{and} ~~calorimetrically~~ ^{assimilation} efficiency, net and gross conversion efficiency (the latter two together are referred to as ecological efficiency). All these values are calorifically expressed, as ~~we~~ the energy content of the organic samples are determined using semi-microbomb calorimeter.

I will shortly be getting a copy of a Chapter written by Dr. J. Mathukrishnan and Dr. T. J. Pandian (MKU) on "Insect Energetics" in an exhaustive book on "Animal Energetics". Once I go through that, I will be in a better position to let you know what kind of modelling could be done ^{using} ~~at~~ these data, so that, if time permits (on your side), you could help me on this aspect also.

I will be only happy to get your opinion, ~~on all these matters~~ comments, suggestions and queries, if any, on all these matters, so that I can modify and progress further, to make my thesis lot more meaningful. I only hope that I am not taking away much of your precious time.

Dr. Ranjit Daniels was explaining about the methods of data entry using a computer - when I bring it along to you. So, if you can elaborate on this, I would ^{bring} ~~carry~~ all these data in a diskette (DSDD) itself; ~~the~~ †