



FIG. 2. Dorsal view of the Psyllid showing the tube of attachment.

P—Psyllid.
T—Tube of attachment.
L—Braconid larva.

has been observed that the attack of the Braconid parasite is more in some localities while in some cases the host *Pauropsylla depressa* (Craw) is free from the attack.

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(The adult Braconid has been sent to a specialist for identification.)

Hyderabad (Dn.), MOHAN BABU NAIDU.
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NATURE OF OESTROGENIC SUBSTANCE IN THE OVARY

THE ability of oestrogens to induce lipemia has already been demonstrated^{1,2,3} This activity appears to be related to fat metabolism. It was, therefore, of interest to find out whether oestrogenic substance of the ovary is in any way connected with lypolytic enzymes. Preliminary observations show that a part of the oestrogenic substance of ovary is (1) precipitable by ammonium sulphate, (2) non-dialysable and (3) associated with a lypolytic enzyme.

The distribution of the oestrogen and lipase in the various fractions was examined. The ovaries were extracted with 10 per cent. NaCl solution for 15 to 20 hours at low temperature. The clear (tissue-free) extract which is obtained by filtration through a Buchner, was saturated with ammonium sulphate, the precipitate taken up in distilled water and dialysed in cold in colloidon bags. The dialysate is then filtered. The estimation of oestrogens in the different fractions is carried out by the modified photometric method.^{4,5} Lipase activity was determined by its action on olive oil substrate. The results are tabulated below.

Expt.	Original 10% saline extract	Ammon. sulphate precipitated and dialysed extract	corrected results of the dialysed extract.
Oestrogens {	1. Free	0.00	0.00
	2. Total	0.20	0.25
	3. Combined	0.20	0.25
Dry wt. of 5 cc. of extract	0.3557 gms.	0.0266 gms.	0.032 gms.
Lipase activity of 5.0 c.c. of extract. cc. of N/20 alkali.	1.27 c.c.	1.31 c.c.	1.63 c.c.

An aliquote of 40 c.c. of the original 10 per cent. saline solution was subjected to ammonium sulphate saturation and subsequent redissolution of the precipitate formed and dialysis. The final volume of the dialysate was 50.0 c.c. Hence a correction has to be applied to all the results of the dialysed fraction. Column III in the table gives the corrected results.

The results show that a part of the oestrogens is in the combined form, which is precipitable by ammonium sulphate. The results also reveal that the lipase activity of the dialysed extract is apparently enhanced; this might be due to the removal of inhibiting substances which are likely to be present in the original 10 per cent. saline extract. Hence the parallelism between the oestrogen and lipase could not be established.

Thanks are due to Prof. V. Subrahmanyan and Dr. N. N. De for their keen interest. Department of Biochemistry, Indian Institute of Science, Bangalore, M. B. SAHASRABUDHE.
December 8, 1944.

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THE EFFECT OF ELECTRIC FIELD ON THE DEPOLARISATION OF LIGHT SCATTERING IN COLLOIDAL SYSTEMS

THE influence of the magnetic field on the depolarisation of the Tyndall scattering in graphite sols, has been investigated in detail by Krishnan,¹ using both polarised and unpolarised incident beams. Krishnan has attributed the changes in the depolarisation values to the orientation of colloidal particles. Hoover,² on the other hand, has tried the orientating influence of electric field on bentonite sols but he does not notice any change in the depolarisation factor when the field is applied. Recently Subramhanya and others³ employed graphite and stearic acid sols to study the effect of electric field on Tyndall scattering using polarised incident beam. The study of the Tyndall

scattering by these authors has been qualitative in nature as they merely find out whether the scattered light increases or diminishes in intensity. In the present investigation a quantitative study of the degree of depolarisation is taken up. In view of the fact that both bentonite and graphite sols consist of laminar particles, the effect of electric field on the depolarisation of Tyndall scattering in graphite sols has been studied using incident beam (1) unpolarised, (2) polarised with vibrations perpendicular to the plane containing the incident and scattered beams and (3) polarised with vibrations parallel to this plane. The depolarisation factors for these incident beams (ρ_u , ρ_v and ρ_h) have been measured with the electric field (1) perpendicular to the incident beam and the direction of observation, (2) parallel to the direction of observation and (3) parallel to the direction of the incident beam.

In general the value of the depolarisation factor depends upon (1) the direction of the electric field, (2) on the potential gradient of the applied field and also on (3) the nature of the incident vibrations. The effect of alternating electric field is also investigated. It is noticed that within the limits of experimental errors, both direct and the alternating electric fields give the same values for the depolarisation factor.

In the investigations carried out, only alternating current is employed as it avoids the gas formation and unnecessary disturbance of the liquid. The following tables indicate the variation of depolarisation with the application of the electric field.

TABLE I

Electric field perpendicular to the incident beam and the direction of observation. Alternating circuit of 60 cycles employed.

Applied electric field volts per cm.	$\rho_u\%$	$\rho_v\%$	$\rho_h\%$
0	33.1	7.0	23.6
40	34.4	5.2	18.9
60	34.2	4.6	14.4
80	34.7	4.3	12.8
120	35.5	3.9	11.5
180	36.4	3.6	10.4
360	36.7	3.2	10.3

TABLE II

Electric field perpendicular to the incident beam and parallel to the direction of observation.

Applied electric field volts per cm.	$\rho_u\%$	$\rho_v\%$	$\rho_h\%$
0	33.1	7.0	23.6
60	33.1	7.8	25.5
120	32.8	9.1	30.7
180	31.5	10.8	35.0

TABLE III

Electric field parallel to the incident beam and perpendicular to the direction of observation.

Applied electric field volts per cm.	$\rho_u\%$	$\rho_v\%$	$\rho_h\%$
0	33.1	7.0	23.6
60	31.2	7.3	29.0
120	30.5	7.9	30.4
180	29.5	8.3	44.8

It is of interest to note that although electric field has no influence on the depolarisation with bentonite sols, yet with the graphite sols, large variations are observed. The results obtained with the electric field are in general in agreement with those obtained by Krishnan,¹ with the magnetic field. The influence of the electric field on the variation of depolarisation factor in vanadium pentoxide, benzopurpurin, and stearic acid sols is under investigation. The details will be published later.

Dept. of Pure & Applied Chemistry,

Indian Institute of Science,

Bangalore,

M. R. ASWATHA NARAYANA RAO.

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POTATO SEEDS FROM "CHIPS"

THE interesting note in the December 1944 *Current Science* of Pal and Deshmukh¹ on "Potato 'Tops' and 'Eyes' as Seed", confirming the earlier findings of Cleland² at Belfast and of Evans³ at Kew, has just come to our notice. Experimental work on the possibilities of utilising thin slices of potato tubers containing 'eyes'—"chips" as Evans calls them—has been in progress in this Laboratory since August 1943. Though we have been able to obtain by closer sowing of 'chips' a yield similar to that obtained from 'normal' (half-tuber) seeds, the publication of our data was withheld pending the results of the following necessary experiments we have planned to carry out this year, to find: (1) the comparative yield from normal and chips when grown in water culture solution in which most of the complications due to soil variation are eliminated, (2) large-scale field sowing of differing sprout lengths of chips with different spacings of both normal and chip seed material at the newly acquired U.P. Government Farm at Hawalbagh, (3) the effect of storage under different environmental conditions on the viability of the chips.

The following summary, however, of the