NEWS

of the LEPIDOPTERISTS' SOCIETY

Number 3
15 May, 1973

PRESIDENTIAL PROFILE

President of the Lepidopterists' Society for 1972-73 is Dr. John Frederick Gates Clarke, senior entomologist at the U.S. National Museum of Natural History in Washington, D.C. Born in Victoria, British Columbia, in 1905, Jack came to the United States in 1916 and became a citizen in 1934. His early professional training and experience were in pharmacy; but he switched to zoology and entomology, receiving a B.S. in zoology from Washington State Univ., an M.S. in entomology there in 1931, and, after serving in the Armed Forces during World War II, his Ph.D. from the University of London in 1953. From 1936 to 1954 his position was as entomologist in the U.S. Department of Agriculture, and then he became curator in the Division of Insects, U.S. National Museum (Smithsonian Institution). He was Chairman of the Dept. of Entomology from 1963 to 1965, after which he was given the title of Senior Entomologist.

Dr. Clarke is one of our foremost authorities on the Microlepidoptera. He has traveled throughout the world on collecting and research trips, and has added a large number of new species to the lists of a variety of moth families. Tropical islands have been one of his specialties, and he has held a number of grants from various agencies to enable him to carry out his research. In addition to an impressive list of titles of shorter works, he has published a voluminous Catalogue of the Type Specimens of Microlepidoptera in the British Museum (Natural History) described by Edward Meyrick (1955-65), Revision of the North American Moths of the Family Oecophoridae (1941), and The Lepidoptera of Rapa Island (1971). For the beginning lepidopterist he wrote A Golden Book of Butterflies (1962) (color-illustrated by André Durenceau).

Jack has brought to the Society a wealth of experience and interest in continuing the improvements in the workings of Society machinery begun by our officers in the past three years. For his service to the Society we thank him, and wish him many years of productivity ahead.

—CVC

TERRITORIAL BEHAVIOR IN BUTTERFLIES

by Jo Brewer

The establishment of a territory, even though that territory may be no larger than a one-room apartment, is an act basic to the nature of man. It has also been documented that it is basic to numerous animals. In the primates it has been extensively studied, and it is commonly seen in dogs, birds and squirrels, to mention but a few.

There have been numerous instances in which we have seen proof that the intent to establish a territory extends to butterflies. It seems to be a very strong instinct in D. plexippus, the monarch. One day while photographing in a rather small weed and wild flower patch in Chillicothe, Ohio, I saw a monarch repeatedly chase a red-winged blackbird out of its territory. Under certain conditions, the monarch can even successfully establish territorial rights while caged. When I first became involved in rearing butterflies, we made a rearing cage by putting the kitchen table upside down on the dining room floor with mosquito netting to cover it. From this "habitat," we collected over 1000 monarch eggs in one season. In this cage at one point there were 3 milk bottles full of blossoming milkweed, and 5 monarchs — 3 females (A, B & C) and 2 males (X & Y). X soon mated with A, but two days passed and she failed to oviposit. Meanwhile X would not allow Y to approach her, or either of the other females. In fact, he successfully kept Y intimidated and "cornered" in the upper edge of the net which was farthest from his base of operations. These operations consisted of mating with A every day for 5 days, each time after an abortive courtship. On the 6th day, he omitted the courtship and rushed at her from the top of the tent, mating instantly. All this time he had not approached either of the other females, nor had he allowed Y to do so. In all this time - and to the end of her life - A laid not a single egg. When I dissected the bursa, I found it inflated with 6 spermato-

phores, none of which had been emptied. The whole episode seems to have been, should we say, a misconception, or merely a baffling waste of energy?

It is a common sight to see swallowtails patrolling the roadside, which may be somewhat different to establishing a territory, at least in an action we observed about ten years ago. It happened on a dirt road which wound through a wood not far from Chillicothe. We had been watching P. troilus flying up and down a stretch of the road about 40-50 feet long. They would come out at one end of this stretch, fly lazily along, and re-enter it at the other end. We stationed ourselves at each end of their range and watched them come and go for about half an hour. There must have been between one and two dozen individuals in the company, several often being in sight at the same time. We caught and released a number of them, and they were all males. Then suddenly 5 of them came out of the woods all at once, flying in a straight line, each apparently in hot pursuit of the one in front of it. They came down the stretch at high speed, swooped close to my head, veered back into the woods, maneuvering among the branches with amazing expertise, and disappeared. It was exactly as if they had been playing tag; but since the instinct to play does not seem to have been developed in insects, I could only guess that we had become a menace to their habitat, and that this concerted behavior was intended to drive us away. Were we in the presence of reasoning butterflies? Many butterflies congregate, and when doing so become markedly less timid. I have known a single butterfly to skim over my head, and I have read that Jerry Powell was once viciously attacked by a small moth; but there seems to be no other record of mass aggressive action by a squadron of butterflies! Of course the lead pilot may have been a female, but at that speed there was no way of knowing.

A second swallowtail's behavior was definitely a battle for territory. While in Carson City, Nevada, in June 1971, I embarked on a photographing spree one afternoon. At about 3:45 I came upon a P. rutulus (X) resting on a lilac bush which was in an enclosed yard behind a small house. Having gained permission to enter the yard, I attempted to photograph this butterfly for about ¾ of an hour. Each time he settled on the bush, a second male (Y) appeared and proceeded to harass him. Each time X retaliated by attacking, chasing him just beyond the boundary imposed by the fence, and no further. He then returned and resumed his position on the same square foot - often the same twig - of the lilac bush. At about 4:45, Y retreated to a tree just outside of the fenced area and settled for the night. X was left to roost in peace on his chosen bush, but whether or not his victory was permanent, I never found out, as I left Carson City the following morning.

Two other examples of territorial behavior have been observed in my own back yard. The first involved two of the B. philenor which Mrs. Dorothy Yeager gave me at the meeting in San Antonio last June, and which I finished r aring in Islesboro, Maine. One of the released males established a territory which encircled an area which encompassed 2 small ardens backed by cedar hedges, an old apple tree, a small field behind the tree, and a medium sized pine tree. After watching his behavior for a day, we released a fresh female on one of the marigolds in the garden. The male had returned repeatedly to this spot, visiting the same two blossoms on each time around - one a marigold and one a red zinnia. He covered the route once or twice, swooping past the female, but failed to dislodge her. He fluttered above and behind her with a swaying motion. She flew about 15 feet to the north and settled in the grass, where he followed and continued fluttering and swaying. At this point I ran for my camera, but when I returned the pair were in copula on a nearby clump of day lilies.

The final incident was even more interesting. In this case I had been rearing P. polyxenes. A male (X) emerged on a Friday in mid-May; another male (Y) and a female (A) on Saturday. On Sunday morning I attempted unsuccessfully to hand pair the female with both males. In the afternoon I released all three, placing them all on the same lilac blossom. After about a minute, the female A, flew to a point higher on the bush and concealed herself among the leaves. Shortly thereafter Y left the blossom, and was immediately pursued by X until both disappeared around the corner of the house. X then returned (he could be distinguished by a damaged wing tip) and began a systematic inspection of the yard, flying low and stopping at a number of weeds and wild flowers in the area which had been left undisturbed for the benefit of butterflies in general. Y returned 4 times and was repeatedly run off by X, who each time returned to his low-flying inspection. After the 5th and last chase, X flew back to the lilac bush, and instantly copulated with A, who had not flown nor fluttered, but had moved onto a blossom close to her hiding place. Y was not seen again.

In this incident, X attacked Y before he had made any attempt to establish a territory. His low flight, like that of a female searching for her larval food plant, was indeed very odd, and his mating behavior was, to say the least, enigmatic. It is hard to imagine which of his senses enabled him to fly directly to the female. He had not seen her alight, nor had he at any time flown near the place where she was hidden, wings closed, in a blossom.

Many facets of butterfly behavior are not really understood. Here, it seems, is a chance for some lucky amateur to spend a few happy hours in the sun enjoying the world around him, and perhaps, in doing so, find some little molecule of new information to contribute to the science of Lepidopterology.

THE GREAT ADVANTAGES OF ZOOLOGICAL NOMENCLATURE AS CONTRASTED WITH THE MANY DISADVANTAGES OF POPULAR NAMES !?!

by Cyril F. dos Passos

The name Papilio eurydice was proposed by Linnaeus in 1763 – over 200 years ago. Since that time it has been synonymized with Papilio canthus Linnaeus, 1767, Satyrus cantheus Godart, "1819" [1824], Papilio argante Cramer, "1782" [1779], Satyrodes transmontana Gosse, 1840 (now ascribed to Field, 1936), Hipparchia boisduvallii Harris, 1862 (Boisduval's Butterfly) (emended to boisduvalii), Satyrodes fumosa Leussler, 1916, and Lethe appalachia Chermock, 1947, and the end may not yet be in sight!

Furthermore, it has been in and out of at least twelve different genera: Papilio Linnaeus, 1758, Argus Scopoli, 1777, Hipparchia Fabricius, 1807, Satyrus Latreille, 1810, Euptychia Hübner, 1818, Enodia Hübner, "1816" [1819], Pararge Hübner, "1816" [1819] Neonympha Hübner, 1818, Megisto Hübner, "1816" [1819], Lethe Hübner, "1816" [1819], Debis Doubleday, "1850-52" [1849] and Satyrodes Scudder, 1875, and the end may not yet be in sight!

On the other hand, the scorned common name for this taxon, "the Eyed Brown," which was suggested by Scudder in 1881 and

possibly earlier, has been continually in use for nearly 100 years, in fact, right up to the present moment, with only Holland (1898, 1930) and Lucien Harris [1972] using "Grass-nymph," and Tietz [1952] "the Eyed Grayling." That record compares most favorably with the scientific name, which has been changed about eight times, while the Eyed Brown has only been known by another name on about three occasions. Some authors have used both names. The Eyed Brown has always been known as a satyrid as opposed to the twelve genera in which it has been placed by scientists.

The Eyed Brown requires only the addition of the adjectives "light" or "dark" to distinguish the two sibling species, eurydice and fumosa, recognized by this author. And no generic or grouping names are involved unless satyrid be so considered. But that appellation has not changed for nearly 100 years. Few scientists even today are entirely sure what the taxon eurydice really is, but all entomologists know to which species the Eyed Brown refers, and it is most unlikely to ever be changed in the future.

Reflect upon this situation, dear colleagues, of which many more examples could be cited, and you may conclude that popular names are not so bad after all. This is really not an extreme case!

All hail and glory to Zoological Nomenclature for stability, uniformity, simplicity, consistency, and giving joyful employment to all scientists and a pleasant feeling of being one of the elite.

THE TOXICOLOGY OF SOME OF OUR MORE USEFUL CHEMICALS

by Richard B. Dominick, M.D.
Research Associate, The Charleston Museum, Charleston, S.C. 29401

Most of us keep a fairly standard stock of chemicals for daily use in entomology; as killing agents, fumigants, solvents and preservatives. Often one wonders about their toxicity to humans, and what to do in an emergency. A bit of homework beforehand, in conjunction with your local doctor, can be of great help. This article is intended to give you a brief background; the homework is up to you. First, talk with your family doctor; have him contact your nearest Poison Center. Don't try to do this yourself. Many medical terms will be unfamiliar to you, and an emergency call to your Poison Center from you will result in confusion and improper diagnosis; your Poison Center will not be able to handle your call, nor give the help you need.

KILLING AGENTS

Cyanide (HCn) The gas is lethal, whatever the salt: potassium or calcium. The latter is "Cyanogen." It blocks oxygen very quickly. The usual route is by inhalation; ingestion is generally a method of suicide. While preparing cyanide jars, therefore, be careful. While cyanide is a quick killer, the maxim holds: "While there's a Heartbeat, there's a Hope." Thus, prompt emergency treatment may save a life. An Emergency Kit is abailable from Lilly Pharmaceutical. First, inhalation of one or more ampoules of amyl nitrite. Prepared in advance are 2 large syringes for intravenous injection: first, 10cc sodium nitrite, then 50cc sodium thiosulfate. Artificial respiration and oxygen as needed. Induce vomiting if swallowed.

Carbon tetrachloride (CCl_4) or "Carbona". Non-flammable, used as cleaning agent and fire extinguisher. Moderately volatile, and may be toxic to liver and kidneys. As with other volatile agents, used by "sniffers" to produce a "high". As with many similar agents of volatile nature, even a modest previous drink of ethyl alcohol enhances the danger. It is usually safe enough, but a susceptible person stands in moderate danger. Centrilobular necrosis of the liver. For our purposes, in general ethyl acetate is safer. Treatment: remove the agent; stimulate respiration. No known antidote. Do not give alcohol. Recommended for use with appropriate reservation.

Ethyl Acetate ($CH_3COOC_2H_5$). An effective killing agent, also used as artificial flavoring in fruit essence, etc. Flammable. Toxic to liver and kidneys, but much less so than most others. Recommended for use. Treatment, remove poison (this applies to all agents), enhance respiration, oxygen if needed. No known antidote. Moderately volatile.

Tetrachlorethane ($Cl_2CHCHCl_2$). A chlorinated hydrocarbon of low volatility, thus useful as a killing agent in modified Robinson traps where it may remain effective for 2-3 days depending on temperature. Normal out-of-door use safe. Inhalation to point of eye and nose irritation is warning of toxic levels. As with some other volatile organic agents, trouble may signal Acute Yellow Atrophy of Liver; fatal, but here indicated only by severe exposure. Alcoholic beverages again enhance danger. Non-flammable. Treatment, same as for carbon tetrachloride. No known antidote. Use common sense, always.

Chloroform ($CHCl_3$). Also an effective killing agent. Used as human anaesthetic with caution. Toxicity to heart, liver, kidneys; CNS depression - faulty breathing, to coma. Non-flammable; decomposes quickly. Volatile. Treatment: remove poison; stimulate respiration. Note: for many similar compounds toxic to liver, 10cc sol. calcium gluconate IV is a non-specific protection. Chloroform is recommended with reservation.

Ether ($H_5C_2OC_2H_5$). Highly volatile and explosively flammable. More useful as a solvent. An anaesthetic, relatively non-toxic. No permanent damage. Treat as for Chloroform. Copper-lined containers prevent decomposition.

FUMIGANTS

Paradichlorobenzene ($C_6H_4Cl_2$) or PDB ("Moth Crystals"). A good and reasonably rapid killer of dermestids and other cabinet pests. A solid, it is volatile and the collection will need frequent attention. The vapor is 5 times as heavy as air, so place it high. Non-

flammable. Low toxicity. Prolonged inhalation gives eye and nose irritation. Serious damage only from ingesting by the spoonful, where kidney blockage from crystal formation occurs. A safe agent for entomological use.

Naphthalene (2 benzene rings, $C_{10}H_8$) (Moth balls or flakes). Will also kill pests but takes much longer and best used as preventative. Vapor also heavy, so place high on cabinet. Seems most toxic to small children (do they eat more or is it physiological?) where hemolysis can block kidney function. Treatment: wash, if swallowed give mild alkali such as bicarbonate of soda (baking soda), etc.

"Vapona", or "No-Pest Strip". (formula too complicated) A Shell product, and an excellent insecticide for the collection. 1 square inch will be effective in a well-sealed cabinet for over a year. Change when droplets form on the yellow surface. No information as to weight of vapor. Toxicity is to the parasympathetic nervous system and is not permanent. Action on postganglionic nerve endings, demanding treatment by the belladonna family (atropine). Consult your family doctor. Wash your hands, and keep your cigarette-end clean. Belladonnas useless as prophylactic. Well recommended for entomological use.

Chlorocresol, Thymol, Carbolic Acid, etc. (Hydroxy derivatives of Benzene C_6H_5OH etc.) These are all grouped under the Phenols. Lister's antiseptic in 1867. Safe for entomology with ordinary reasonable care. Routes (as with all the others): inhalation, ingestion and skin. Takes a good bit to be toxic. Eventual liver and kidney damage; smoky urine in toxic amounts. Antidote: remove poison (as always), stimulate vomiting if ingested and proceed as below. A weak acid, it helps to give a weak alkali such as baking soda. Creosote is in this group. Note (below) Isopropyl alcohol is a specific solvent for creosot

SOLVENTS

Ether (as above).

Acetone (CH_3COCH_3). Very flammable, volatile and unstable. Keep tightly stoppered. Toxicity is CNS depression, mainly respiratory; mild skin irritation. No permanent effects. Treatment: non-specific; remove the poison, wash, etc.

Xylol (Xylene, $C_8H_{10}O_2$). A good degreasing agent. You may try some of the other organic solvents as well ("organic" means carbon-based). Flammable. Toxicity, mild - no permanent effects known. Irritant, depression of CNS, and possible liver and kidney toxicity. Treatment: wash, artificial respiration or oxygen if needed. A safe agent, recommended for use. Note – as with all chemicals, a skin rash may result, usually an individual sensitivity. Consult your doctor.

PRESERVATIVES

We shall consider only the Alcohols, and Formaldehyde. There are three Alcohols:

Ethyl Alcohol, Ethanol (C_2H_5OH). The beverage, or Grain alcohol. Renders specimens slightly softer for dissection, though the other alcohols are acceptable. At 70%, a good disinfectant. All alcohols moderately flammable, good for "alcohol lamps". Toxicity: following CNS stimulation, a CNS depressant; dose to stupor is close to fatal. Acute or chronic toxicity is to brain, liver, kidneys, stomach and intestines. Denatured Alcohol means any ethyl alcohol made impotable for drink by addition of various agents. Treatment for ethyl, no known specific antidote. Gastric lavage for acute ingestion; ingestion of water for acute hangover.

Denatured Alcohol. As above, usually containing various amounts of Methanol, Acetone or other compounds rendering it toxic to drink. There are numerous formulae.

Isopropyl Alcohol ($CH_3CHOHCH_3$). A disinfectant equal to 70% Ethyl alcohol. A specific solvent for creosote. Toxicity and treatment, as above. No permanent effects reported, though toxicity develops from headache to low blood pressure, etc. Do not drink it: advisory.

Methyl Alcohol, Methanol (CH_3OH). A deadly poison; Wood Alcohol, "Torpedo Juice", causing blindness and death, by ingestion or inhalation. Mechanism unsure, but produces formic acid or formaldehyde within body cells. The high water content of organs of specific vulnerability explains, for example blindness - the vitreous and optic nerve. Physiology and toxicity, severe acidosis, excreted very slowly (4 days for a fair dose) by lungs and kidney. Damage to liver, kidney, heart, brain and eye. Treatment: ethyl alcohol (pure booze) can block out enzyme useage of methanol. Supervision by your family doctor. Gastric lavage with bicarbonate of soda (1 teaspoon per large glass), then give 100 proof liquor. Methyl alcohol not recommended unless for specific purpose.

Formaldehyde (HCOH) is a gas, ordinarily available from Formalin (a 40% sol.) used not only for preserving specimens, but for embalming and in some beauty mixtures as well. Acute toxicity (by ingestion) causes burning down the GI tract. Naturally, more severe symptoms may follow. Normal toxicity, irritation of mucous membranes: eyes, nose, throat. No permanent effects known. For skin symptoms, see below. Formaldehyde may be more irritating to skin than other compounds on a basis of sensitivity; ask your doctor to contact your local allergist.

The Hydroxides (Sodium, Potassium, Calcium) (NaOH, KOH, CaOH). This group contains the very powerful alkalis - the strong, corrosive bases. The sodium salt is lye, or corrosive sublimate. By all means, keep clear of the eyes, and wear goggles. Permanent blindness can easily result. Treatment: as quickly as possible, wash with water or ANY OTHER BLAND fluid at hand. Continue to wash for at least 10 to 15 minutes, even before you call the doctor. Do NOT waste time on "eye solutions". Call your doctor immediately for admission to an Eye Hospital. Wash under a faucet or by any immediately available facility, even the neighbor's quart of milk. On skin, vinegar is a good household antidote, a mild acid to counteract the base. Hydroxides are useful as chemicals in genitalic dissections, etc. Safe, if used with proper care.

FIRST AID

This takes care of the four principle routes of toxicity: inhaled, ingested, by skin, and in eyes. In all cases, first remove the poison; wash, remove the patient or the source of contamination, but do not waste time wondering – get the man and the poison apart. Wash it off; in the case of the eyes, wash under water or any bland liquid handy – milk etc. Boric acid or other "eye" solutions are more harmful than good. Best is to run a faucet straight into the eye and keep it running. Hold the man down while doing so. We repeat this for emphasis. By mouth, induce vomiting except in the case of gasoline, kerosene or other petroleum distillates, or, if

unconscious (danger of aspiration into lungs with consequent pneumonia), or with hard corrosives (lye, etc.). After vomiting (tickle back of throat with feather, finger or other) dilute any remaining poison with bland liquid – milk, beaten eggs, flour or any starch, even mashed potato in water. Never give alcohol except in methanol poisoning. The "Universal Antidote" is good to have on hand, but its effectiveness depends on activated charcoal. " Activated" means dried out, and unless sealed in an airtight container its effectiveness becomes lost by adsorption of moisture. Blankets for shock; no external heat applied. Sample of poison or the label, and then call your doctor. If inhaled, give fresh air ("remove the poison"), loosen clothing, and give artificial respiration as needed. Mouth-to-mouth is best: head tilted far back, chin forward, false teeth out, tongue free of airway (use finger to be sure), and blow into mouth and nose until chest inflates. Repeat 20 X per minute. Your own common sense goes a long way; for example, don't blow into mouth with nose open.

RECOMMENDED REFERENCES

Clinical Toxicology of Commercial Products Gletson, Gosselin, Hodge, Smith. 3rd ed., 1969. Williams & Wilkins Co., Baltimore.

Handbook of Poisoning Dreisbach, 7th ed., 1971, Lange Medical Publications, Los Altos, California.

Handbook of Industrial Toxicology Plunkett, 1966, Chemical Publishing Inc., N.Y.

Safety Manual Shell Oil Co. (for "Vapona").

Poison Control Center, Kansas City (computer printout).

Iowa Clinical and Drug Information Service

The two latter are at the disposal of your Poison Control Center, and here again you will be well advised to work out your program beforehand with your family doctor, since these computer services need interpretation and do not serve well in an emergency any more than your Poison Control Center can render its best service without time to research the information to suit your particular needs.

ACKNOWLEDGMENTS

I have spent good hours with the staff of the Poison and Drug Information Service of The Medical University of South Carolina, who have given unstintingly of their time and done a great deal of homework themselves in helping prepare this paper. In particular, I should like to thank Dr. J. Leo Brueggeman for his interested help; Miss Pamela Haase, who shares in the daily advisory phone calls, many of an emergency nature; and Mr. Ray Maddox, a Resident in Pharmacology, who prepared the broad outline of this article, and truly researched the seat-work. Mr. Raphael Jones, former Associate Professor of English at The College of Charleston, has gone over the manuscript, torn it apart and helped put it back together. He deserves thanks for his devotion to clarify, and for much friendly advice.

1972 FIELD SEASON SUMMARY: Corrections and Additions

In the North Carolina report (pg. 14 of the Summary issue), one might possibly misunderstand the data on Phyciodes batesii. The May 26 discovery was not the first state record for the species, but the first known state discovery of an actual colony of the species. On pg. 15, Smith's Virginia report of finding Problema bulenta at the Lanexa site was temporarily left out because the initial report of that species from Va. had not yet appeared in the Journal (Vol. 27, No. 2, p. 146).

Below is the Zone 9 report, promised in the last issue:

ZONE 9 – NORTHERN NEOTROPICS - SEASON SUMMARY FOR 1972

Coordinator: Eduardo C. Welling M. Contributors: Thomas D. Stelnicki, S. O. Matoon, O. Shields, J. R. Mori, W. Swisher, E. M. Matoon, L. P. Grey, D. V. McCorkle, K. Hansen, R. Lavigne, and M. E. Toliver.

WEATHER SUMMARY – For third straight year, above average rainfall for the northern tip of the peninsula of Yucatán. Rain very scarce in parts of Chiapas, southern coastal strip of Oaxaca, and all of Guatemala. In the latter area this was very very severe, with the same predicted for 1973 by the local climatical experts.

MEXICO:

STATE OF OAXACA: In spite of late rains, good collecting beginning in June, with greater numbers of better species than during the past two years. All in all, a good collecting season.

STATE OF CHIAPAS: Good collecting in comparison with former years in which many species were reduced in numbers. A very good year.

STATE OF SONORA: Toliver collected at Rancho los Algodones, Bahía de Algodones, near San Carlos, 30 and 31 Dec. finding Brephidium exilis, Nathalis iole, Vanessa cardui, and Pyrgus albescens common; Hemiargus ceraunus, Strymon columella, Hypostrymon critola, and Chiomara asychis uncommon. An Agapema galbina was attracted to light.

STATE OF CHIHUAHUA: R. Lavigne collected Sandia macfarlandi about 75 kms north of Chihuahua at Rancho Campana, during Apr. both sexes being taken.

S. O. and E. M. Matoon and L. P. Grey made an expedition to the type locality of Speyeria nokomis coerulescens, 23 kms southwest of Colonia Juárez, above headwaters of the Rio Piedras Verdes, 30-10 'N., 108-12 'W., on September 12-13. They took 11 males and two females, the first topotypical specimens since Townsend collected the type series in 1899.

STATE OF DURANGO: O. Shields, J. R. Mori, W. Swisher, S. O. and E. M. Matoon, L. P. Grey, D. V. McCorkle, and K. Hansen collected 14 kms east of El Salto, Durango, elev. 2400 m.. finding about 200 specimens of S. nokomis, near coerulescens, if not that., between Sept. 6-9th.

STATE OF NUEVO LEÓN: Matoon collected Sphingicampa heiligbrodti at Linares, on Sept. 2.

ARUBA, NETHERLANDS ANTILLES: Stelnicki found Phoebis sennae and statira rarely in early June on the southern edge of this very dry desert island.

GUATEMALA:

DEPARTMENT OF ZACAPA: Welling collected here between Aug. and Jan. 1973, at la Unión, 850 m. elev., near the Honduras border. Insects were fairly common, but perhaps butterflies could have been better, only about 10,000 being taken, in comparison to about 25,000 moths. Rain scarce. Fauna of this locality is mixed, equatorial elements sneaking inward at higher elevations from the east coast where they cannot lower down where it is drier, and temperate elements coming down from the higher mountains to the south. Some Ithomiidae taken, either new sps. or something not recorded from Central America.

DEPARTMENT OF ALTA VERAPAZ: Welling noted good moth harvests near Chajsel, Mpio. Cobán, during December and January 1973. Butterflies were scarce during the same months, except for Leptophobia aripa.

DEPARTMENT OF EL PETÉN: Welling, collecting here during late August and late January, 1973, took good series of fine Ithomiids including Dircenna euchytma and Dismenitis sosunga. Others found in Aug. were Archonias tereas, Heliconius doris, Eueides aliphera, Dismorphia marion, Hesperocharis pasion, Phyciodes atronia, Eresia phillyra, E. eranites, E. clara, etc.

THE LEPIDOPTERISTS' SOCIETY STATEMENT OF CONDITION

31 December 1972

ASSETS

Cash:	
Checking Account	$12,605.23
Savings Account	5,056.98
Back Issues Stock	1.00
	$17,663.21

LIABILITIES

Dues & Subs. Deferred	$ 348.00
Life Members @ $150.00 each	5,550.00
Illustrations Fund	99.00
Publications Fund	32.00
Advance Payments	662.00
Profit and Loss	10,972.21
	$17,663.21

STATEMENT OF OPERATIONS

INCOME

Dues		$10,967.68
Regular	(8,661.68)	
Sustaining	(810.00)	
Student	(896.00)	
Life	(600.00)	
Subscriptions		2,069.00
Sales		796.34
Memoirs	(233.50)	
Back Issues	(562.84)	
Unscheduled Income		$ 1,352.00
Color plate charges		
Page charges		
Contributions		148.00
Illustr. Fund	(99.00)	
Pub. Fund	(34.00)	
Postage Fund	(15.00)	
		$15,333.02
Income over expenses		$ 321.81

EXPENSES

JOURNAL Publication Volume 26:1-4		$ 9,394.79
NEWS Publication Numbers 1-6		2,905.15
Reprint of Volume 1 Numbers 2-7		459.65
Binding of Memoirs (Hard-back)		240.00
Administrative Costs		1,411.62
Annual meeting	(74.60)	
Supplies & Forms	(591.24)	
Postage	(745.78)	
Transferred to savings		600.00
		$15,011.21

EVALUATION. There are no known unpaid bills for 1972. As predicted, our costs and expenses rose sharply in most areas. It is hoped that the modest increase in student dues for the current year (1973) will place our operations on surer ground; our present operating margin is much too thin to provide for the unplanned and unanticipated cost and price increases which are the rule rather than the exception these days. Our operating costs should remain substantially the same for 1973 as for the year just past. An estimated budget for 1973 is: JOURNAL $10,000; NEWS $3,000; Administrative expenses (including postage) $1,500.

Respectfully submitted,
S. S. NICOLAY, Treasurer, 1972

NEWS AND NOTES:

It is a sad duty of the Editor to report the passing of three of our esteemed friends and colleagues in recent months. Automobile accidents claimed the lives of Dr. Josef Moucha of Czechoslovakia on March 9 and Lutz Bayer of the University of Wisconsin on April 24. John C. Symmes died April 14 after a long illness. Obituary articles are to appear later.

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PACIFIC SLOPE MEETING, 1973: The Twentieth Annual Meeting of the Pacific Slope Section will be held on Saturday and Sunday, Aug. 25-26, at the Museum of Natural History, 2559 Puesta Del Sol Rd., Santa Barbara, CALIF., 93105. Registration will be from 9 to 10 A.M. Sat. at the Museum patio. The annual banquet will be Sat. night, and the program will feature a presentation on

Speyeria collecting in Mexico by James Mori and Sterling Matoon. For information on motels and local collecting spots, write Nelson Baker at the Museum. To submit titles if you wish to present a talk, write Charles A. Sekerman, 6460 Denny Ave., North Hollywood, CALIF. 91606, by the end of July. Also, Richard Priestaf has the welcome mat out for lepidopterists attending the meeting who wish to share his apartment. He can be reached during the day at the Catalogue Dept. of the U.C.S.B. Library (phone 961-3463), or in the evening at home (phone 968-2443).

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Bryant Mather sent in a couple of newspaper clippings. One informs us that the Baltimore Checkerspot, Euphydryas phaeton (Drury) has been officially made the Maryland state insect by the State Legislature. Society member John Fales was largely responsible for the action. The second clipping tells of two Shafter, Californians, John Nickelson and Carlos White, selling butterfly larvae sets for $6 each, and having sold 15,000 sets last year. Mather felt that anyone grossing $90,000 a year selling caterpillars deserved a writeup in the NEWS!

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Donald Baber of Burlingame, CALIF. reports what appeared to him to be a migration of Cynthia cardui in San Bruno Park on April 24th. He saw as many as 50 in one hour traveling northward a few at a time. A big year for Painted Ladies?

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The Spanish-Luso-American Lepidopterists' Society (SHILAP) has just been organized, with headquarters at the Entomology Room, Escuela Tecnica Superior de Ingenieros Agronomos, University City, Madrid (3). Objectives: Study of life cycle, behavior and distribution of the Iberian Lepidoptera, with periodical publication of field and laboratory data. Yearly membership: $5.00. - Applications for Admission: The General Secretary of SHILAP, Apartado Correos nº 331, Madrid (Spain).

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A new group, the New Hampshire Entomological Society, organized in February 1973 and based at the Dartmouth College Museum, Hanover, N.H., has been formed to promote entomology and entomological research in New England and elsewhere. It is intended that its proposed serial publication, SEMIDEA, will provide an additional medium for the ready publication and dissemination of observations and research reports in the various fields of entomology, and will, in particular, encourage amateur participation.

Membership is open to any individual, anywhere, with an interest in entomology. Fee for regular membership is $2.00 per year, sustaining membership $10.00 per year. Members will be entitled to reduce subscription rates to Society publications and to publication therein free or at reduced cost.

Correspondence relative to membership, or other inquiries, may be directed to W. D. Winter, Jr., Secretary, 480 Summer Street, Westwood, Massachusetts, 02090.

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CULLINGS FROM THE ZOOLOGICAL RECORD: A list of items of general interest to students of North American butterflies, list of local lists, and listing of systemstic studies and new names with full citations for original descriptions. These are being prepared and sent to interested lepidopterists. The series starts with 1920 and runs up to date. Send 25¢ and an addressed, stamped envelope for a sample year (4 pages.) Ready for distribution now, 1920-1923, 1924-1927, 1964-1967 – $1.00 for each 4-year group. F. M. Brown, Fountain Valley Rural Station, Colorado Springs, COLO. 80911, U.S.A.

LETTER TO THE EDITOR:

I believe the Lepidopterists's Society members are in general agreement that the recent expansion of interest in conservation practices is welcome indeed. Accurate and objective treatments of individual situations cannot be overstressed, however!

The letter to the Editor in the January 1973 NEWS would have us conclude that man has been the dominating influence on Papilio indra pergamus population levels in southern California. Personal observations concerning the biology and population dynamics of P. indra populations from California to Colorado since 1965 lead to the conclusion that major factors in populations from year to year are: (1) climate (2) egg and larval parasitoid levels.

Climatic conditions played a major role in indra populations in southern California in 1972 as abnormally dry conditions resulted in reduced growth of food plants and their early decline in many areas. Ample reason for the generally univoltine nature of southern California indra populations and the useful function of pupal diapause were demonstrated. Large numbers of indra pupae undoubtedly held over in 1972.

Let's imagine, for a moment, a hypothetical experimental situation where one or more collectors attempted to eliminate this insect from a place such as the classic Tecate mountain pergamus locality in San Diego county, by collecting. If they lived there and did nothing for years, it is quite doubtful that they would succeed!

It should also be pointed out that but a small portion of the total area where P. i. pergamus exists in southern California is ever collected in a given year; and that, only sporadically and inefficiently.

Finally, the rugged, isolated habitats characteristic of indra populations serve very well to encourage their survival. Such regions figure to be far down the list in terms of man's habitat manipulation to suit his purposes.

Bruce M. Griffin
California State Polytechnic University
Pomona

BOOK NOTICES:

Howarth, T. G. 1973. South's British Butterflies. 320 pp, 96 colored plates, bound. A rearranged version of this classic work, with new paintings of aberrational as well as typical adult and immature forms of British butterflies. E. W. Classey Ltd., 353 Hanworth Rd., Hampton, Middlesex, TW12 3EN, England, £10.50.

Tietz, H. M. 1972. An Index to the Described Life Histories, Early Stages and Hosts of the Macrolepidoptera of the Continental United States and Canada. 1041 pp. in 2 vols., bound. Published by Allyn Museum of Entomology, Sarasota, Fla.; distributed in U.S. by Entomological Reprint Specialists, P.O. Box 77224 Dockweiler Station, Los Angeles, CALIF. 90007, U.S.A. $25. This is a valuable tool for the researcher in moth and butterfly life histories and taxonomy. It is the posthumous publication of the index begun by Harrison M. Tietz (1895-1963), covering the literature up to about 1950, and is the only such work since a similar effort of Henry Edwards in 1889. Although no attempt was made by the editors to correct errors in Tietz's original manuscript, and there are some, the important quality is that of its intended purpose — and that is not diminished by the imperfect printing and the lack of currency and Tietz's mistakes. The work is divided into two parts, "Insects' (including sections on Works Consulted, Insect Common Names, and Macrolepidoptera, the last being the bulk of the work, giving references to biological publications on the species as presented alphabetically); and "Plants" (with sections on Zoological Hosts, Common Names, Indefinite Designations, Scientific Names and Synonyms).

There is a lot of useful, time-saving information packed into these two volumes, the first hard-bound publication of the Allyn Museum.

— CVC

Emmel, Thomas C. 1973. An Introduction to Ecology & Population Biology. Norton, N. Y. 196 pp. Paperbound. $2.95. A fine, well-illustrated student's introduction to ecology, aimed at college biology classes as a supplement or resource book; and by one of our able members.

Watson, Allan, 1973. An Illustrated Catalog of the Neotropic Arctiinae Types in the United States National Museum (Lepidoptera: Arctiidae). Part II. Smithsonian Contribs. Zool. 128, 160 pp., 106 pls. Paperbound. Supt. of Documents, U. S. Govt. Printing Office, Washington, D.C. 20402, $2.85 postpaid.

SPECIAL NOTICE

BACK VOLUMES AVAILABLE (Complete)

VOLUMES 1 thru 5 — Reproduction of volumes 2 and 3 has now been completed. Done in offset printing, the finished product is an exact duplicate of the original format.

All volumes of the first 5 years of Society publications are now available for sale to all members and subscriber in the 8½"x11" format. These first 5 issues of the LEPIDOPTERISTS' NEWS, when bound together in a single volume, provide a wealth of interesting and useful reference material in one book.

(Remainder as in the notice appearing in News No. 1 (1973) except where certain portions may be deleted. ie the part of anticipating volumes 2 and 3 being reprinted, etc. and the separate pitch on vol.'s 4 and 5).

RESEARCH REQUESTS:

Intensive collecting is under way in preparation of The Lepidoptera of Santa Barbara County, a checklist and distributional analysis of the butterflies, skippers, and moths of this California county. Any Santa Barbara Co. records you have will be greatly appreciated, and your help will be acknowledged.

Richard C. Priestaf, 5631 Cielo Ave., Goleta, CALIF. 90317, U.S.A.

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I am gathering data for a work on the butterflies of Orange Co., California, and would appreciate information on any collections from this county in private or institutional collections. Please let me hear from you if you possess any material from Orange Co., or know of others who do.

Larry Orsak, Museum of Systematic Biology, University of California, Irvine, CALIF. 92664, U.S.A.

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Locality and population data for Euristrymon ontario (all subspecies) and E. favonius urgently needed from entire ranges. Complete data as possible necessary for population plotting. Information will be greatfully acknowledged.

Mike Fisher, 1200 South Monaco St., No. 20, Denver, COLO. 80222, U.S.A.

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I am making a study of the Karner Blue Butterfly, Lycaeides melissa samuelis, and would greatly appreciate any information that can be supplied by lepidopterists who have collected it during the last 40 years. Specifically, I am interested in localities, dates of capture, sex and numbers of specimens taken; and any life history, habitat, behavioral and other notes will be appreciated. Lepidopterists with access to large university or museum collections are requested to check them for specimens of the Karner Blue and send data. Thank you.

Robert Dirig, 315 Plant Science Bldg., Cornell Univ., Ithaca, N.Y. 14850, U.S.A.

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Specimens needed for examination and distribution records solicited for the 8 subspecies in the Speyeria aphrodite complex (typical aphrodite, alcestis, whitehousei, byblis, columbia, winni, mayae, and ethne). I am working on the biology and systematics of this complex, emphasizing the relationship of subspecies alcestis and aphrodite. I am also looking for help from people who can supply me with live males and females, ova, or pupae, in season.

Richard A. Arnold, Dept. of Entomology, Michigan State Univ., East Lansing, MICH. 48823, U.S.A.

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I wish to obtain records of Papilionidae from Indochina (N. and S. Vietnam, Cambodia and Laos) in private or institutional collections, for eventual publication. All contributions will be acknowledged. Please indicate if you are willing to lend your material for examination.

Frederick Scott, Nova Scotia Museum, 1747 Summer St., Halifax, Nova Scotia, CANADA.

* * * * * *

I am engaged in a study of the distribution and taxonomy of Central and South American DISMORPHIINAE (all subgenera of Dismorphia) and PIERINAE (particularly Catasticta, Leodonta and Leptophobia). I would greatly appreciate hearing from anyone who has material with full data to sell or exchange, or who could send information on these butterflies, or who is planning a field trip in the above areas.

J. H. Robert, ' Belemia," Avenida Doctor Fleming 21, Vistahermosa, Alicante, SPAIN.

NOTICES:

Members of the Lepidopterists' Society are invited to use this section free of charge to advertise their needs and offerings in Lepidoptera. We cannot guarantee any notices, but all are expected to be made in good faith. Please be brief, clear, and check spelling. Avoid long lists. Generally, notices will be limited to 3 appearances if more than one are requested. The Editor reserves the right to alter or reject unsuitable copy.

POSITION AVAILABLE: Manager for butterfly and insect department of rapidly expanding wholesale and retail natural history business. Requires energetic individual with ability to communicate his enthusiasm to others. Send resume' with application. Jerome M. Eisenberg, The Collector's Cabinet, 1000 Madison Avenue, New York, N.Y. 10021, U.S.A.

WANTED: Sphingidae from southwestern and northwestern U.S. in any quantities. Will collect any order in exchange.
Vernon A. Brou, Jr., Rt. 1, Box 74, Edgard, LA. 70049, U.S.A.

WANTED: To buy or otherwise obtain copies of each of the following books: J. A. Comstock, Butterflies of Calif.; C. J. Maynard, Manual of North American Butterflies; Puckering & Post, The Butterflies of North Dakota.
Leroy C. Koehn, 6464 Antoinette Dr., Mentor, OHIO 44060, U.S.A.

WANTED: I urgently need the following books: Seitz' Macrolepidoptera of the World, Vol. 7, American Noctuidae, text and plates or plates only, in English or German ed.; Holland, Butterfly Book (revised ed.); E. L. Bell, The Hesperioidea (1938); Lindsey, Bell & Williams, The Hesperioidea of N. America; Raizenne, Forest Lepidoptera of Southern Ontario (2 vols.).
Louis Handfield, 50, Richelieu South, Mont St. Hilaire, Quebec, CANADA

WANTED: I would like caterpillars of P. glaucus, P. troilus and G. marcellus. If anyone would be so kind as to bring any of these to the Annual Meeting in Sarasota - with food plant - I will be happy to negotiate for them in terms of cash or exchange.
Jo Brewer, 300 Islington Rd., Auburndale, MASS. 02166, U.S.A.

WANTED: Series or single specimens of Parnassiidae. I will purchase or exchange.
Curt Eisner, Kwekerijweg 5, Den Haag, Netherlands.

WANTED: To buy a copy of Holland's The Butterfly Book, revised ed., 1931.
Edward J. Pfeiler, Jr., Dept. of Zoology, Washington State Univ., Pullman, WASH. 99163, U.S.A.

WANTED: Lots of 100 to 1,000 each, A-1 papered or spread of any attractive butterflies, such as Papilio, Morpho, Caligo, Catopsilia, Heliconiinae, Catagramma, monarchs, viceroys, etc. Can also use exotic insects. Send lists with prices and quantities available with first letter.
Jerome Eisenberg, The Collector's Cabinet, 1000 Madison Ave., New York, N. Y. 10021, U.S.A.

WANTED: The following issues of J. Lepid. Soc. & News, vol. 2, nos. 5, 6, 7; vol. 3, nos. 1, 4, 5; vol. 6, 4 - 5; vol. 7, nos. 3, 4; vol. 8, no. 6; vol. 9, nos. 2, 3, 4, 5. Send information of available issues and price to
Dennis Groothius, 1700 E. 56th St., Ap.t 3808, Chicago, ILL. 60637, U.S.A.

WANTED: To buy ova of North American Sphingidae, esp. Manduca, Sphinx, Eumorpha, Pachysphinx - or to exchange for pupae of Sphinx ligustri.
Bernd Lenzner, 7151 Affalterbach/Baden-Württemberg, Schillerstrasse 29, GERMANY.

WANTED: To buy copies in good condition of the following: Carpenter, G. D. H. & E. B. Ford, 1933, Mimicry (London); Punnett, R. C. 1915, Mimicry in Butterflies (Cambridge); Eltringham, H. 1910 African Mimetic Butterflies (Oxford); and any reprints dealing with mimicry and protective coloration in butterflies or other insects.
Boyce A. Drummond, Dept. of Zoology, Univ. of Florida, Gainesville, FLA. 32601, U.S.A.

EXCHANGE: Large supply of butterflies from Ohio, other midwestern states, and Japan.
Newell Schwamberger, 9265 Airport Highway, Monclova, OHIO 43542, U.S.A.

EXCHANGE AND BUY: Wish North American, African and Oceanic butterflies and moths, especially A. luna. Available trade material is from Malaya, Brazil and Mexico.
Theodor D. Haas, P. O. Box 1170, New York, N. Y. 10008, U.S.A.

FOR SALE: Live chrysalids of Battus philenor hirsuta, 1973 stock, $.50 each. Large quantities available if ordered early.
E. Homer Edgecomb, 2132 Miller St., Redding, CALIF. 96001, U.S.A.

FOR SALE: Ova of Philosamia cynthia, $.30 per dozen, airmail postpaid.
Donald J. Dill, 7316 S. Sacramento Ave., Chicago, ILL. 60629, U.S.A.

FOR SALE: Ornithoptera alexandrae, $184.00 (U.S.) per pair. These came from an old collection but are well papered, bred specimens and absolutely superb. Many other species available; write for catalogue.
Queensland Butterfly Co., P. O. Box 175, North Tamborine, Queensland, 4272, AUSTRALIA.

FOR SALE: Collection of moths in papers from different localities in Guatemala and southern Mexico, excluding Saturniidae, Sphingidae, Pyraloidea, Arctiidae, Lithosiidae, Geometridae, Notodontidae, Ctenuchidae, Adelocephalidae and Noctuidae. Also INFORMATION WANTED: Wish to know the whereabouts of Ronald Alspaugh, formerly of Canton, Ohio (1963), reported to be living in Fla. Wish address of this person for unfinished business, and I will reward provider of correct address with some specimens.
Eduardo C. Welling M., Apartado Postal 701, Merida, Yucatan, MEXICO.

FOR SALE: Miscellaneous papered species including some Papilio from Washington, Oregon and California, as well as other states. Must sell in order to make room for the coming season's catch – 10% off on orders of $10 or more.
Ruth Adamson, 415 Medcalf Lane, Montesano, WASH. 98563, U.S.A.

FOR SALE: Ornithoptera magellanus, O. kaguya, Agehana maraho and other dried Formosan Lepidoptera, representing a wide variety in great quantities. Have some butterfly aberrations to offer.
Mrs. Chang Pi-Tzu, P. O. Box 873, Taipei, TAIWAN (FORMOSA).

FOR SALE: Large stock of butterflies and moths of northern Australia and Timor, esp. of Sphingidae, Saturniidae, rare moths, Hesperiidae, Lycaenidae, Papilionidae, and Nymphalidae. Many rare species not found elsewhere in Australian region. Beetles and other insects as well. Worldwide list includes offerings from Malaysia, India, Philippines, New Guinea and other countries. Also - due to my move from England, I have been unable to fill orders and communicate. For this I apologize, and I am now working to catch up.
Terence B. Bateman, P. O. Box 3917, Darwin 5794, N. T., AUSTRALIA.

FOR SALE: Literature on Lepidoptera, including Schmetterlinge von Europa by G. A. W. Herrich-Schäffer (1843 - 1856; 6 vols. in 2; lacks color plates).
Albert Pinkus, North Ridge Rd., Mohegan Lake, N.Y. 10547, U.S.A.

NEW AND REINSTATED MEMBERS:

COLLINS, Donald E.	2132 N. Steele St., Tacoma, WASH. 98406, U.S.A.
DORFMANN, Oskar	Dorfhalde 26, CH-3612 Steffisburg, SWITZERLAND. Lepid., esp. Parnassius, Arctiidae, Zygaena. Coll. Ex. Buy.
EDMISTON, Janel	Rt. No. 1, Kalispell, MONT. 59901, U.S.A. Lepid., esp. Morpho, Papilio (adults only). Coll. Ex. Buy, Sell.
FERGUSON, David	Box 407, Julesburg, COLO. 80737, U.S.A. Lepid., esp. Nymphalidae, Papilionidae, Lycaenidae, Saturniidae, life hist., Coll. Ex.
FORD, Robert J.	Box 29, South Gate, CALIF. 90280, U.S.A. Lepid., esp. Arctiidae. Coll.
FRAZER, A. J.	35 Kiwong St., Yowie Bay 2228, New South Wales, AUSTRALIA. Lepid., Coll.
GUPPY, C. S.	4120 St. Georges Ave., North Vancouver, British Columbia, CANADA. Lepid., esp. life hist. of Rhop. Coll. Ex. Buy, Sell.
HANKS, Alan J.	34 Seaton Drive, Aurora, Ontario L4G 2K1, CANADA. RHOP., esp. books on Lepid.; Coll. Buy.
HARTMAN, Lee C., Jr.	Rt. No. 1, Box 234A, Troutville, VA. 24175, U.S.A. Lepid., Buy.
HEMPEL, John C.	1602 N. Concord Drive, Janesville, WISC. 53545, U.S.A.
HITRIZ, Miss Holly	P. O. Box 116, East Hampton, CONN. 06424, U.S.A. Lepid., esp. rearing Saturniidae and D. plexippus, and coll. Saturniidae, Papilionidae, & Sphingidae. Coll. Ex. Buy.
JOHNSON, H. Eugene	Private Bag No. 2, Mount Silinda, RHODESIA, Rhop., Coll., Sell.
KLEIN, William L.	2301 W. 112th St., Inglewood, CALIF. 90303, U.S.A. Rhop., esp. Speyeria, Papilio, Colias population distribution & hybridization. Coll. Ex.
KRAUSS, George	141 Alkier St., Brentwood, N. Y. 11717, U.S.A., Lepid., Coll., Buy.
KURZEK, Dennis G.	205 Ferguson, Berryville, ARK. 72616, U.S.A.
LEGGE, Dr. Allan H.	Environmental Sciences Centre, Univ. of Calgary, Calgary 44, Alberta, CANADA. Lepid., esp. population genetics of arctic and alpine species.
LEMANS, P.	2 Rue Boissonade, Paris 14eme, 75, FRANCE. Rhop., esp. Charaxes.
LEVY, Jack N.	98 Pleasant St., Cambridge, MASS. 02139, U. S. A.
LINCOLN, Waldo C., Jr.	Stagecoach Rd., Ware, MASS. 01082, U.S.A. Rhop., esp. Papilionoidea. Coll.
McELROY, John E., Jr.	222 Millwood Lane, San Antonio, TEX. 78216 U.S.A. Rhop., Macro., esp. Nymphalidae, Papilionidae, Pieridae; Coll., Ex.
RUCKY, Frank	383 Falconer St., North Tonawanda, N. Y. 14120, U.S.A.
SCHILDKNECHT, C. E.	R. D. No. 3, Gettysburg, PA. 17325, U.S.A.
SCHWARTZ, John	1265 Lennoxshire, Elgin, ILL. 60120, U.S.A. Lepid., esp. Papilionidae, Saturniidae, Sphingidae, rearing and cocoon-building patterns; Coll. Ex. Buy, Sell.
SOULÉ, George F.	3901 Parkview Lane, Apt. 3-B, Irvine, CALIF. 92664, U.S.A. Rhop., Coll.
SYMMES, Miss Jean	Route 1, Madison, GA. 30650, U.S.A.
TOPCZEWSKI, Robert	3261 South 85th St., Milwaukee, WISC. 53227, U.S.A. Lepid., esp. Speyeria. Coll. Ex.

VACHINO, Giuseppe	Via San Lorenzo 7, I - 10015 IVERA, ITALY. Rhop., Macro. Coll. Buy.
VAN EPP, David J.	4501 West Channel Islands Blvd., Oxnard, CALIF. 93030, U.S.A.
VENEDICTOFF, Mrs. Nadia	2.42 Avenida Rio Amazonas, Quito, ECUADOR.
WEBB, Bruce	3360 Neal Rd., Paradise, CALIF. 95969, U.S.A.
YU, C. K.	3 Ton Rong Rd., Puli, Taiwan 545, REPUBLIC OF CHINA. Lepid., esp. Papilionidae. Coll. Ex. Buy, Sell.
ZEBOLD, R. A. L.	30123 Rock Creek Drive, Southfield, MICH. 48076, U.S.A.

NEW ADDRESSES:

BARNEY, William	705 Cardinal Gibbons Dr., Raleigh, N. C. 27606 U.S.A.
BATEMAN, T. B. (Entomologist)	P. O. Box 3917, Darwin 5794, N. T. AUSTRALIA
BORG, Richard	845 Coakley Dr., San Jose, CALIF. 95117 U.S.A.
BRAUN, Annette F. Dr.	5956 Salem Road, Cincinnati, OHIO 45230 U.S.A.
BROOKS, James C., M.D.	Carrollton Clinic, Ambulance Drive, Carrollton, GA. 30117 U.S.A.
BROWN, J. A.	2275 W. 39th Ave., Suite No. 7, Vancouver 13, British Columbia, CANADA.
CHEHEY, Robert L.	2705 North 32nd Street, Boise, IDAHO 83703, U.S.A.
COFFIELD, Dana	c/o M. C. Coffield, AMOCO, P. O. Box 6784, Beirut, LEBANON
DIMOCK, Thomas E.	c/o R. P. Anderson, 464 Fairfax Avenue, Ventura, CALIF. 93003 U.S.A.
DIXON, Keith	7082 Via Serena, San Jose, CALIF. 95139 U.S.A.
DVORAK, Stanley	4520 Dickey Drive, La Mesa, CALIF. 92041, U.S.A.
FISHER, Mike	1200 South Monaco St., No. 20, Denver, COLO. 80222, U.S.A.
FRANCIS, M. Clare Sister	Saint Francis College, Fort Wayne, IND. 46808, U.S.A.
GILMORE, Rick	35 South Devon Avenue, Winter Springs, FLA. 32707, U.S.A.
GLANZ, A.	51-17 Rockaway Beach Blvd., Far Rockaway, N. Y. 11691, U.S.A.
HARDESTY, Richard	1105 Washington, Douglas, WYO. 82633, U.S.A.
HARTZENBUSCH, Henry	c/o The Associated Press, Moselstrasse 27, Frankfurt am Main, WEST GERMANY.
HOLBACH, George F.	Route 1, Adell, WISC. 53001, U.S.A.
INOUE, Hiroshi, Dr.	311-2, Bushi, Iruma City, Saitama Pref. JAPAN
KLOPP, Wayne W.	6705 S.W. 44th Street No.10, Miami, FLA. 33155, U.S.A.
LAWRENCE, Donald A.	Rt. No.1, Carbondale, ILL. 62901, U.S.A.
LECH, Joseph M.	P. O. Box 28, 4 Kings Road, Westford, MASS. 01886, U.S.A.
LEGGE, John A.	436 Wewoka Drive, Indian Hills, Boulder, COLO. 80303, U.S.A.
McKENNA, Terence	2447 Carleton Street, Berkeley, CALIF. 94704, U.S.A.
NORGATE, Patricia, Mrs.	Post Office, Drayton, Wellington County, Ontario, CANADA
PHILLIPSON, Don	460 So. Marion Pkwy - 1652, Denver, COLO. 80209, U.S.A.
ROSCHE, Richard C.	305 Elm Street, Crawford, NEBRASKA 69339, U.S.A.
SAFFLE, Michael B.	2295 Williams, Palo Alto, CALIF. 94306, U.S.A.
SATO, Seiichiro	P. O. Box 6, CHITOSE, Tokyo, JAPAN
SAWYER, P. F.	P. O. Box 1249, LAE, PAPUA/NEW GUINEA
SMITH, Billy J.	102 Deakin Circle, Monterey, CALIF. 93940, U.S.A.
SMITH, Richard H., Jr.	11252 Chestnut Grove Sq., Apt. 245, Reston, VA. 22090, U.S.A.
SORENSON, John T.	1846 Dwight Way, Berkeley, CALIF. 94704, U.S.A.
TURLIN, Bernard	BP 27, BUTARE, RWANDA
WALLIS, Albert T.	Route 4, Box 661, Sequim, WASH. 98382, U.S.A.

A QUICK RELAXING METHOD — *by V. A. Brou*

From time to time articles are presented describing improved versions of relaxing boxes. My purpose in this writing is to convey an even simpler method used by this writer for several years with great success.

Surely all collectors at some time have grit their teeth when a prized papered specimen would not soften, or when trying to spread small Lycaenids and other fragile insects only to tear their wings in an effort to spread the specimen. Even more, small Hesperiidae that have been papered, are extremely difficult to spread without some destruction to the specimen.

The entire relaxing operation can be accomplished without the use of any type of container. Simply remove the specimen from the papered triangle, and inject the specimen with plain tap water. Any type of hypodermic syringe will do; a 10 ml. syringe is perfect. A disposable syringe can be obtained at most drugstores and will last many years. It is best to use a 20 or 25 guage needle. Insert the needle directly into the thorax of the specimen under the wings. Completely fill the thorax by pushing the plunger hard till the water squirts out the ear cavity. Place the specimen back into the paper triangle it was stored in and let set for 5 - 20 min. This will allow the antennae to soften in case the water did not enter the antennae when injected.

This method is foolproof when using good quality papered specimens, regardless of age. Specimens which have rotted because of poor drying technique or specimens covered with fungus should be watched carefully as surface wetting will occur rapidly.

I have used this method successfully on well over 10,000 lepidoptera specimens of all types except micros. Coleopterists will find this method works quickly in softening beetles also. If a relaxing box is used in conjunction with this method, results are even better.

Memoirs of the Lepidopterists' Society, Number 1 (Feb., 1964)
A SYNONYMIC LIST OF THE NEARCTIC RHOPALOCERA, by C. F. dos Passos
Price:

Society Members, paper covers, Addenda et Corrigenda (revisions of Melitaeinae and portions of Lycaenidae supplied separately), $5; non-members, $7.50. Hard-cover binding (revisions bound in): Members, $8; non-members, $10.

Send to Memoirs Editor Sidney A. Hessel, Nettleton Hollow Road, Washington, CONN. 06793, U.S.A.

INFORMATION ABOUT THE SOCIETY . . . .

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