I'LL TELL YOU HOW

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I go collecting with my husband. Not that I ever catch anything of importance. I 'm sure I don't know why he takes me with him summer after summer but the way he says, "We took a new species," when he's telling about it afterwards makes me ready to go again and again and not ask too many questions. You understand, of course, that the "we" is rhetorical. I have collected with him for fifteen summers—collected beside him, in front of him, behind him, timing the sweep of my net to match his, trying to roll my net just as he does, moving slowly and evenly close to the ground, or swiftly and forcefully as the case may be. I've draped my net over a battered hat and looked for insects on the bolting cloth screen in the top of it,

I've mumbled indistinctly around an aspirator as I sucked in small particles of life, and peered knowingly to right and left to locate insects on the wing. In fact I've done everything, except catch the good ones. So knowing all about it except how to do it, I shall try to answer a question he is sometimes asked flatteringly, "How do you do it?" With this apology for speaking I should like to record a few of the tricks we have learned from friends and from chance circumstances which have added to our pleasure and success in collecting some of the rare insects we have taken in recent months.

On a collecting trip at Piney Point, Md., Dr. R. I. Sailer walked backward in a shallow, sedge-filled pool of brackish water seiving the water as it welled up through and over the trampled vegetation. When we heard him exclaim over a rare Myrid—so rare in fact that it was new to the National Museum Collection, we began imitating his method. We were rewarded not only with more of this Myrid but with Hydrometrids, Hebrids, Delphacids, and Celaphids—twenty Celaphids in one net full. This method has since proven its worth in several other habitats where vegetation is growing in water.

Methods of collecting grow step by step, a suggestion here, a chance bit of luck months later. We had collected **Dorycephalus** with the late Dr. E. D. Ball by lying flat on the ground, parting the stems of the grasses and taking the slender little alligators with our aspirators. Varying the method to suit the occasion we found one summer that we could take Ochterids beside permanent streams of hot water almost whenever we wished to expend the energy to get close enough to the moist hot earth to see the tiny beasts with our bifocals. This summer we found the method sometimes worked with Delphacids and other difficult insects in a great variety of habitats. It is guaranteed to produce the maximum of discomfort to the collector in the shortest length of time. He can become completely covered with chiggers, he can approach a heat stroke, he can make elbows and knees sore for a week, and when the ground is seepy with water his clothes soon lose all resemblance to what the well dressed gentleman should wear. But when all other methods fail, it is worth trying.

It was only a natural step from the afore-described procedures to the knowledge that some insects which live deep in bunches of grass, or actually down in the roots, can be taken by cutting the bunches with a knife and either taking the insects directly from the stubble or shaking them onto a net from the cut portion. In so doing we have often dulled the cook's butcher knife and have worn down whetstones sharpening it afterward.

Finding great rank sedges in a patch in Meade County, Kansas, yielding nothing, we started in desperation to trample them down and then sweep over the trampled patches. Immediately we began getting an occasional specimen of **Dorydiella kansana**, a species of Cicadellid then undescribed and in a few minutes we took one specimen of a tiny new Fulgorid **Bakerella rotundifrons** Beamer. Some time later we returned to this spot to find the farmer had mowed through the edge of this patch of sedges and by sweeping the stubble we were able to take many specimens of this new

species, and also another new species in the same genus, **Bakerella bidens** Beamer. Shortly after this experience we took an occasional long winged specimen of **B. cinerea** in a patch of sedges growing near Lawrence at the rate of only one for a half hour's work. Examining the sedges by hand we found both long and short winged forms of this species living in the four-inch mat of dead stems thru which the green sedges were growing. So quick were these Delphacids when they were exposed that the utmost speed was necessary to get them in an aspirator. This vigorous method even when successful damaged the soft bodies and ruffled the frail wings. We came home and got a small garden sickle with which we mowed a swath about two by eight feet. In this bare stubble we could take as many as a dozen specimens at one sweeping. Later in the summer we chanced upon a wild grass meadow the day the farmer was mowing it. We had been taking a few specimens of some of the well known Delphacids in this meadow but now sweeping over the freshly raked stubble we found hundreds of specimens not only of the common kinds but also of several new species which we had not seen at all before. In the uncut grass nearby we could rarely take one. Returning after a few days of hot sun on the meadow we could get very few specimens on the cut portion. Apparently there was virtue in the grass being freshly cut. This series of experiences led to our taking a scythe on our collecting trips as part of our regular equipment. Sometimes the results are amazing. We can't always predict when cutting will increase the catch. Sometimes it yields nothing but strenuous exercise. But many times when we find too little of interest in a likely spot, mowing a patch eight or ten feet square brings a rich reward.

Arriving one morning at a new patch of sedges we had high hopes for a new Delphacid. The sedges were heavy, thick, as tall as our heads, and growing in shallow water. The most vigorous sweeping brought nothing. Then we placed a sweeping bag just above the water level, tight against a bunch of sedges. Approaching the clump on the side opposite the net we hit it a sharp whack with the side of the hand. On the very first attempt there were a number of specimens of a new **Kelesia**. We had even better results when we changed to a water net. The bag of the water net was much shallower and the one straight edge of the net fitted up against the bunches closer. We also used variations of this method many times to collect numerous interesting specimens while the vegetation was too wet from rain or dew for ordinary methods.

Each student we have taken with us and certainly every specialist we have had the pleasure of meeting in the field has added his bit to the cumulative whole. We like best of all to go collecting with specialists, for each man has his own little tricks and the more ways we learn the better the chase. Now if someone will kindly suggest a way to have hip boots, knee pads, a waterproof shield to sit or lie on, and Father Time's scythe in addition to normal collecting equipment without being encumbered with the paraphernalia, we'll apply for priorities on a human dynamo to keep them all going without getting tired.

Temperature and population density, especially the latter, were found to affect color development to a marked degree; lower temperatures and crowding producing the darker forms.

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SOME NEW SPECIES OF CUERNA (Homoptera-Cicadellidae)

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In order that some of the specific names may be available in disease transmission studies, the following descriptions are published in advance of a revision of the genus. A key to the species and illustrations will be published later.

Cuerna occidentalis, n. sp.

Resembles **C. limbata** (Say) but is bronze in color instead of black, with veins often light. Length 6-8 mm.

Structure: Distance between eyes is to median length of crown as 4.5 is to 3.5. In dorsal view front margins of head almost straight, slightly less than a right angle, apex sharp for this genus.

Color: Head, pronotum and scutellum black with rather fine light markings. Light arcs of front usually covering outer third of anterior half of crown, leaving a dark wedge-shaped area between them. Elytra bronze in color, quite rugulose, veins light or dark, apical cells whitish subhyaline.

Genitalia: Aedeagus with two pairs of basal processes. In caudal view inner pair about half as long as outer, widest at base, gently curved in to almost touch just before middle, then curved out to end about even with small blunt teeth on aedeagal shaft; outer pair widest at base, arising dorsad of base of inner pair, diverging at about a right angle an basal two thirds, then curving parallel with aedeagal shaft, tapered on outer third, curving caudad to end in sharp points slightly beyond apex of aedeagal shaft. In lateral view inner processes widest on basal third, straight, paralleling aedeagal shaft, gradually tapered on outer two thirds to short points; outer processes slightly wider than inner, about parallel-sided on