

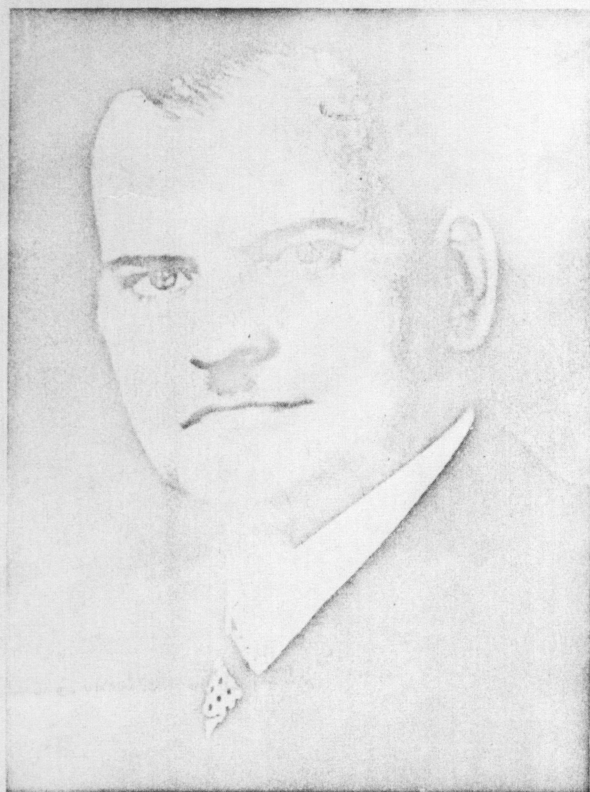
P. T. FURST

# The Oligocene World of Georg Statz

PHOTOS BY THE AUTHOR

THE LIVES AND LABORS of few insects have so gripped man's interest and imagination as those of the common honey bee. The incredibly efficient social organization of the hive has been fascinating through the ages. The economic importance of the bee to man—from his earliest primitive days to the atomic present—and to plants has hardly an equal in the insect world.

It is no wonder that any discovery of bees of the distant geological past brings joy to students of insect life. Unfortunately, fossils of quite early bee forms are not common. Only about half a dozen localities for fossil bees are known, most of them in western Europe. The oldest known geological specimens of the honey bee were discovered imprisoned in amber from the East Prussian coast. Such finds are very rare, but at least one was known to the Romans, whose poet Mar-



tial composed a special ode to such an amber bee in which he suggested that she looked as though imprisoned in her own nectar. Surely, he exclaimed, that is precisely the death she would have wished for!

Other bee fossils from the Eocene, Oligocene, and Miocene have been found in western Germany and in the French Provence.

Undoubtedly the most important fossil collection of bees which did their buzzing in the swampy tropical forests of the Oligocene around 35,000,000 years ago comes from a place called Rott, in the Siebengebirge (Seven Mountains) of the West German Rhineland. As early as 1907 two of the fossil bees from Rott, one owned by the Harvard Museum and the other by the British Museum, were described by T. D. A. Cockerell as *Synopsis dormitans* and *S. henrichowi*, respectively.

But it remained for a German schoolteacher named Georg Statz really to enrich our knowledge of the little honey bee of the past. For more than a quarter century Statz collected tirelessly in the Rott deposits, amassing and classifying an enormous collection of

Part of the Statz Collection at the Los Angeles County Museum, with Dr. Fred Truxal. (P. T. Furst)  
◀ Dr. Georg Statz. (Los Angeles County Museum)



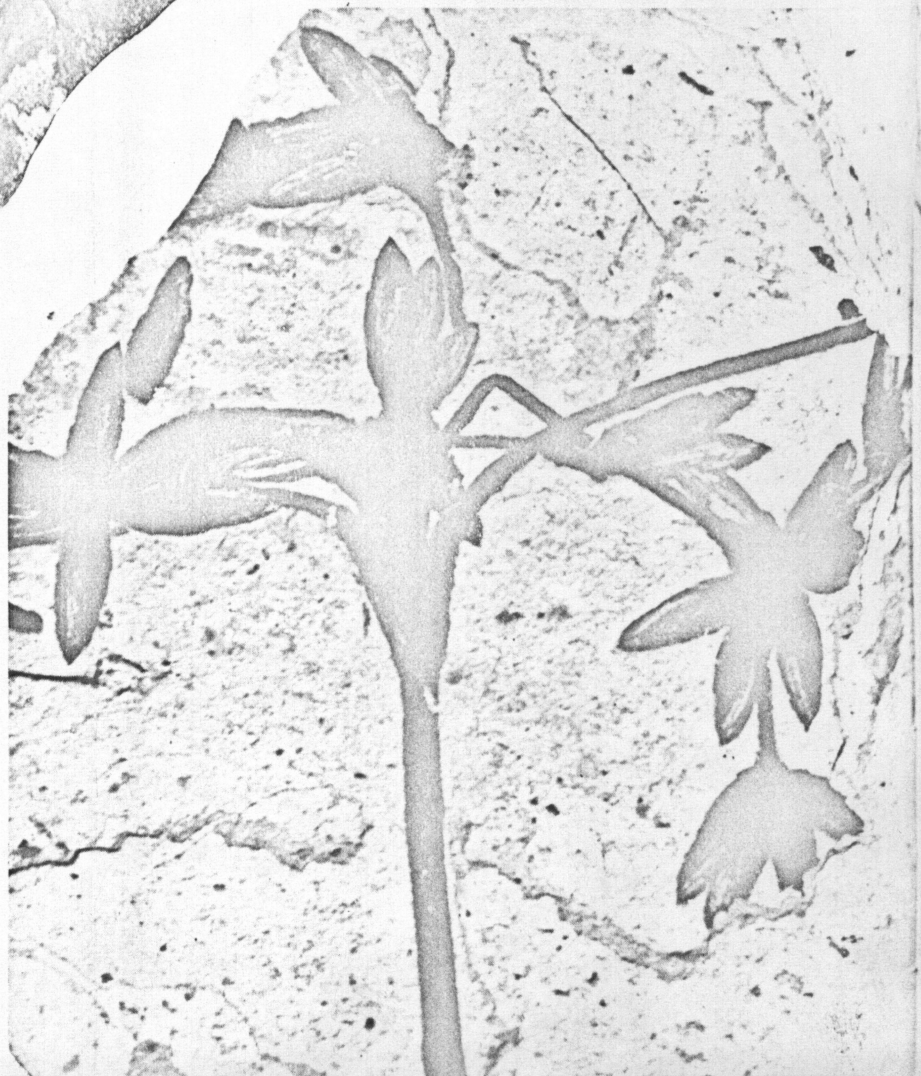
5258  
LACMIP hypotype 71111111

← Water spider, *Argyroneta antiqua*.  
Length (head and body) 12 mm.  
For tens of millions of years this arachnid has lived in ponds and sluggish streams of Europe and Asia, breathing oxygen from a silvery air bubble she picks up periodically at the surface. The modern form is *Argyroneta aquatica*.

→ Honey bee worker, *Synapis dormitans*.  
Length (head and body) 14 mm.

LACMIP hypotype 3916

A tiny plant, greatly enlarged.







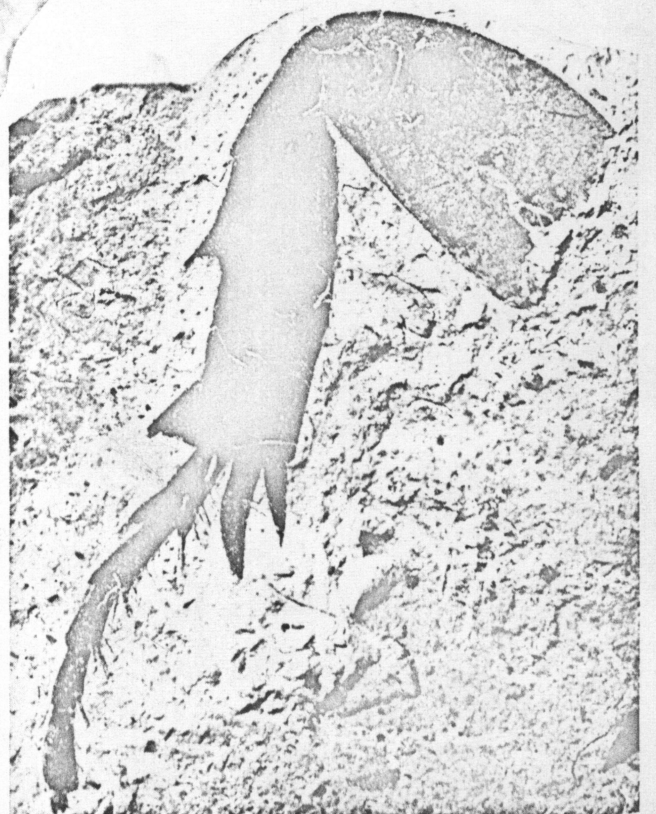
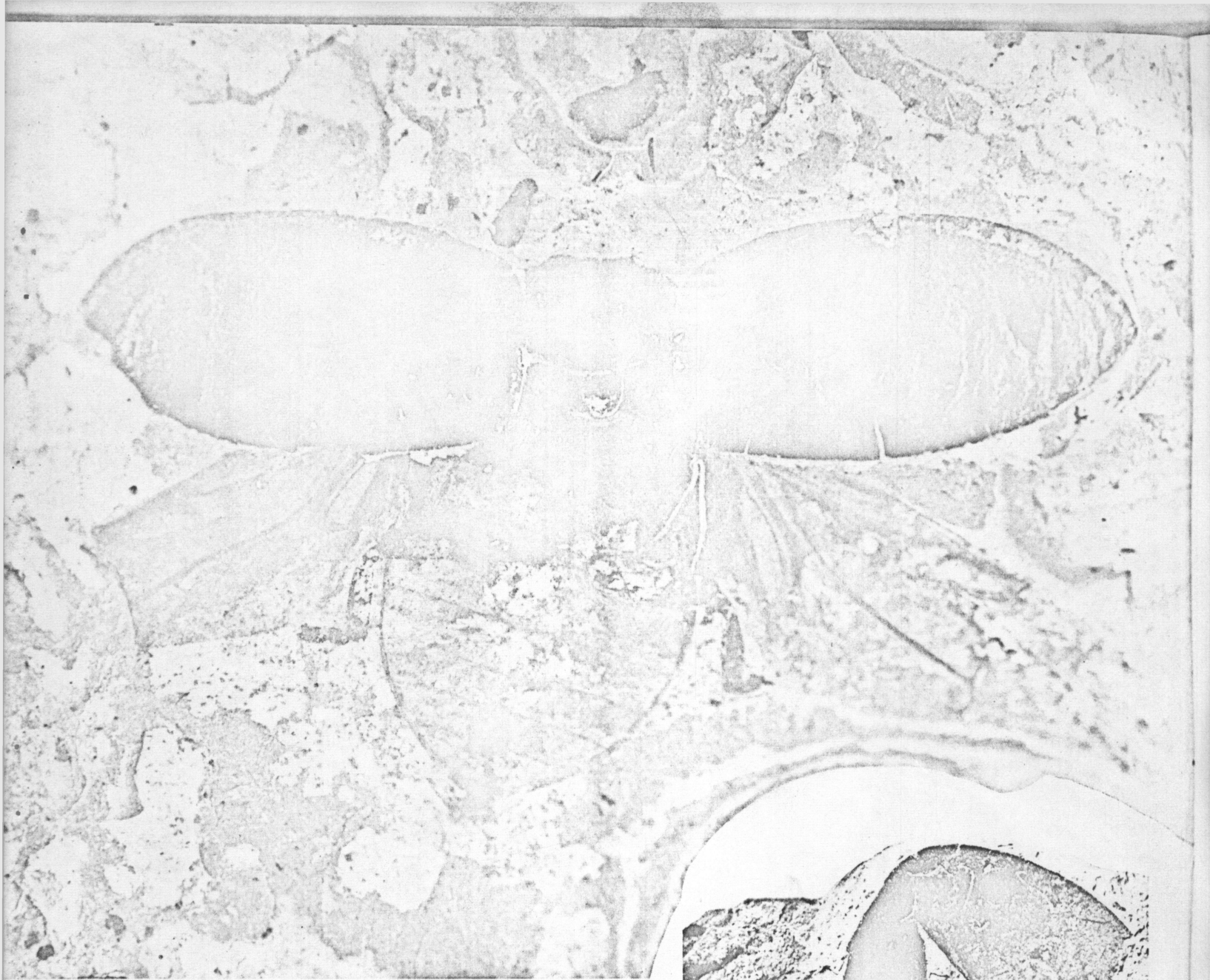
fossil insects including many honey bees, from those Oligocene forests of the Rhineland.

In 1945, at the age of 51, Statz died in Germany while trying to get back to his beloved collection which fortunately had survived the war. It had been housed in the cellars of German scientific institutions while his own home was destroyed by bombs. It is a measure of Georg Statz's love for his life's work that almost his last words to his wife as he lay dying at Ulm on the Danube were, "What about the collection? Is it safe?" And he died knowing it was, indeed, safe.

Today the Statz Collection of Fossil Insects and Plants—7,500 specimens including land and water in-

sects, spiders and tiny plants, all beautifully mounted and fully classified and described, along with many photographs and monographs—is housed permanently at the Los Angeles County Museum. It was acquired after many months of negotiation with the late naturalist's family and the French customs authorities in North Africa where the collection had been sent after the end of the war.

The Statz Collection was built between two wars, for it was in 1918 that young Georg—born in 1894, a teacher's son and an inveterate collector of anything from butterflies, fossils, and flowers to ancient Roman and Greek relics—discovered his first fossilized insect at Rott. A teacher himself, he was drawn as if by a



magnet, vacation after vacation, his wife and daughter with him, back to the Oligocene forests of Rott, from which he shipped hundreds of rock slabs back home to Cologne by truck. After school hours he laid the slabs carefully out in his garden to let the winter frost split them. Then cutting the slabs down to handy size, he meticulously photographed each specimen and classified it. The final step was mounting in special wooden display cases he designed.

No difficulties fazed Georg Statz. Realizing a lack of proper academic background for his work at Rott, he went back to school, studying from 1925 to 1930 at the University of Cologne which, in 1940 recognized his great contribution to science by awarding him an honorary doctorate. With bombs falling and

Hind or middle leg of a scarabaeid beetle.

Length ("knee" to claw) 11 mm. P

not in Spon, 1973

LACMIP Hypotype 3908





LAEMIP hypotype 3800

← Ladybird beetle, *Coccinella* sp.  
Width (wing-tip to wing-tip) 12 mm.

→ Immature form of a true bug.  
(Actual size not given, but this  
is probably enlarged between  
six and 10 times.)

Not in  
Spony 1973 ?  
LAEMIP →  
Holotype 3152

the old city crumbling into ruins around him, he continued his scientific work through World War II until, in October 1944, a direct hit destroyed his own house. Reluctantly he left for Bavaria with his wife and daughter, his collection finding refuge in the cellars of the Geological Institute.

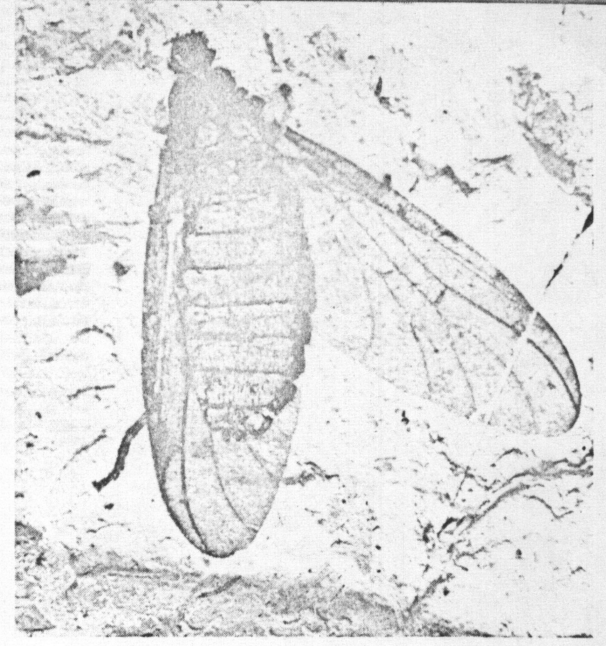
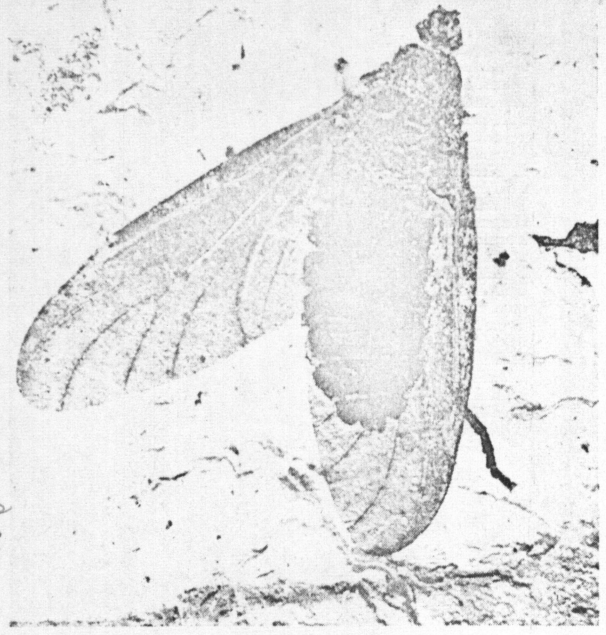
After VE-Day, the Statzes took the road back to Cologne, to rebuild their lives. Weakened by the years of war, however, Dr. Statz fell ill at Ulm on the Danube, in June 1945, and died August 28. In her correspondence with the Los Angeles County Museum, his widow described his great happiness in his last moments on learning that his life's work was intact. "His collection, after all, was his whole life," she wrote.

His life, and now his monument, the collection includes 45 specimens of four kinds of honey bees, besides fruit flies, true bugs, many of them aquatic, and many plants. Among the most remarkable of the fossils are those of the very perishable water spiders, *Argyroneta antiqua*, forebears of the modern European and Asiatic *A. aquatica* which, encased in a silvery bubble of air picked up periodically at the surface, lives in ponds and quiet streams feeding on tiny aquatic insects and small fishes.

The gathering, preparing, classifying and interpreting of all these thousands of specimens, representing a past remote by tens of millions of years yet directly tied to the present, was the work of a devoted man with the kind of tireless, inquiring mind which brings

Marsh fly,  
*Plecia rhenana*.  
 Length (head to  
 wing-tip) 19 mm.  
 The actual  
 insect is to  
 the left;  
 to the right is  
 a natural cast  
 or negative  
 impression.

LACMIP  
 hypotype  
 3418

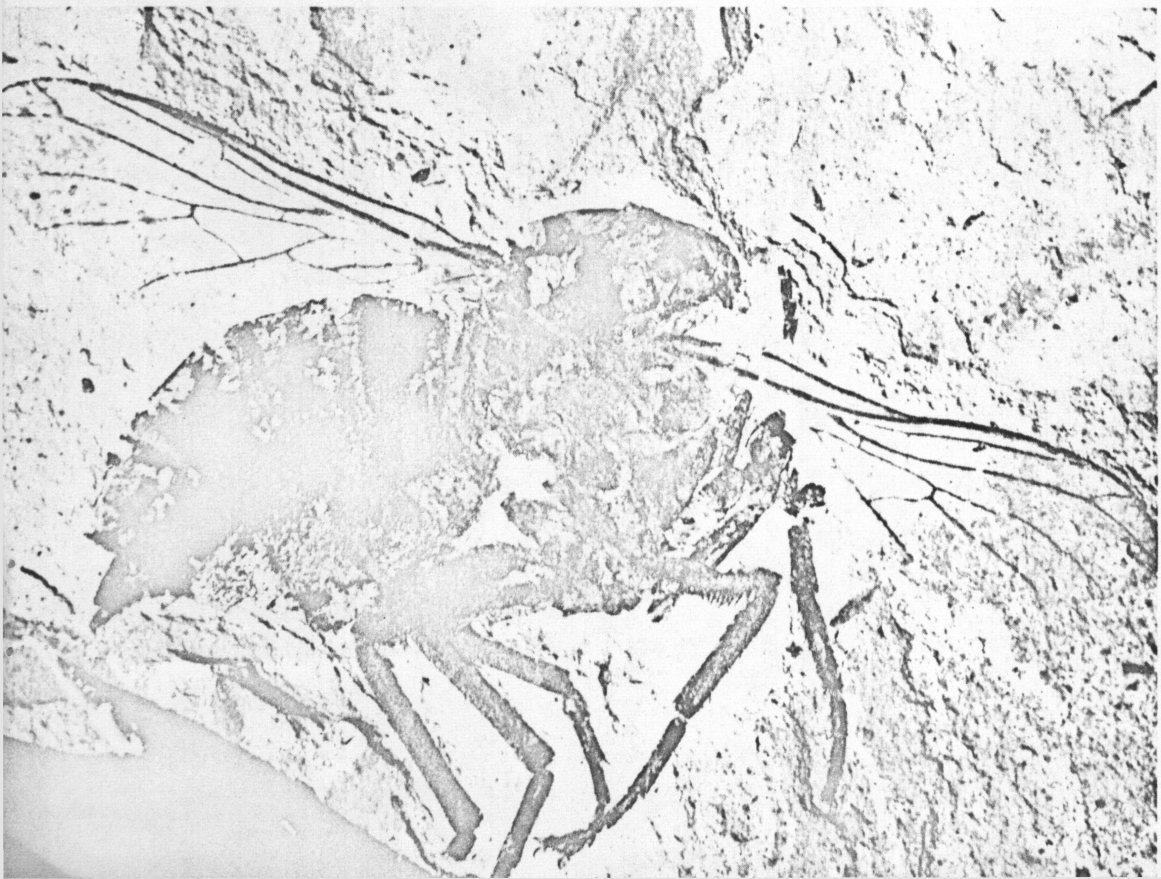


progress in science and society. But to recreate the life of the past and relate it to that of the present takes more than hard work and pure science. It takes imagination. As Dr. Fred Truxal, Los Angeles County Museum curator of entomology and now guardian of the Statz Collection, put it: "You could look at all those beautiful specimens, meticulously classified and described, and think, 'What a cold, scientific mind it must have taken to do all this painstaking work.' Nothing could be farther from the truth. To me, Statz was a poet."

Just how much of a poet is shown in every line of the Statz monographs. No matter how detailed and accurate his scientific descriptions, he always found

time to speculate on the lives of his ancient insects—the bees, buzzing from flower to flower in the Oligocene forests, without man there to take the fruits of their labor. To him, his specimens were no mere dead, cold fossils. They were, as he wrote in closing his monograph on the 35,000,000-year-old bees of the Rhineland lignite forest, almost alive:

"Even if during the lifetime of these children of the sun no man's eye or ear could feast itself on their busy labors, it is as though the beholder of their fossilized remains even today perceives, ever so gently as from a great distance, the humming of the bees, the rustling of the leaves, and the scent of the flowers of the lignite forests. . . ."



← LACMIP holotype 3631  
 A small fly, *Empis spinifera*, closely related to our common house fly, shows even the minute leg hairs and delicate structure of wings. Length (head and body) 7 mm.

→ LACMIP hypotype 3203  
 A water bug (a true bug), *Naucoris rottensis*, immature. Length (head and body) 9 mm.



