

Distribution of mosquitoes (Diptera: Culicidae) in Poland

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Abstract

Maps showing the known distribution of the 47 species of mosquito reported from Poland and a bibliography of Polish mosquitoes are presented. A brief history of mosquito recording in Poland is also included.

Introduction

To date, 47 mosquito species have been reported from 223 identifiable sites in Poland. Despite numerous publications, however, our knowledge on the distribution of Culicidae in Poland remains fragmentary and inadequate, and does not reflect the actual situation. Many records are concerned with the Baltic coast and adjoining areas of northwestern and northern Poland, the Kampinos Primeval Forest (Puszczka Kampinoska), and the city of Warsaw and its vicinity in eastern parts of central Poland. Mosquitoes of the Świętokrzyskie Mountains National Park (Świętokrzyski Park Narodowy) in southeastern Poland have also been well studied, and there is some information about the Culicidae of the Białowieża National Park (Puszczka Białowieska) in northeastern Poland. On the other hand, data from other regions are incomplete, and often only consist of faunistic notes and similar contributions.

Up to the outbreak of World War I, the literature contained only a few notes about mosquitoes in Polish territory. Such notes were invariably in faunistic works devoted to the Diptera as a whole, as for instance those by Loew (1871) and Bobek (1893, 1894). The first publication devoted entirely to the Culicidae was by Speiser (1908), and was concerned with the mosquitoes of what was then Western Prussia (now Western Pomerania).

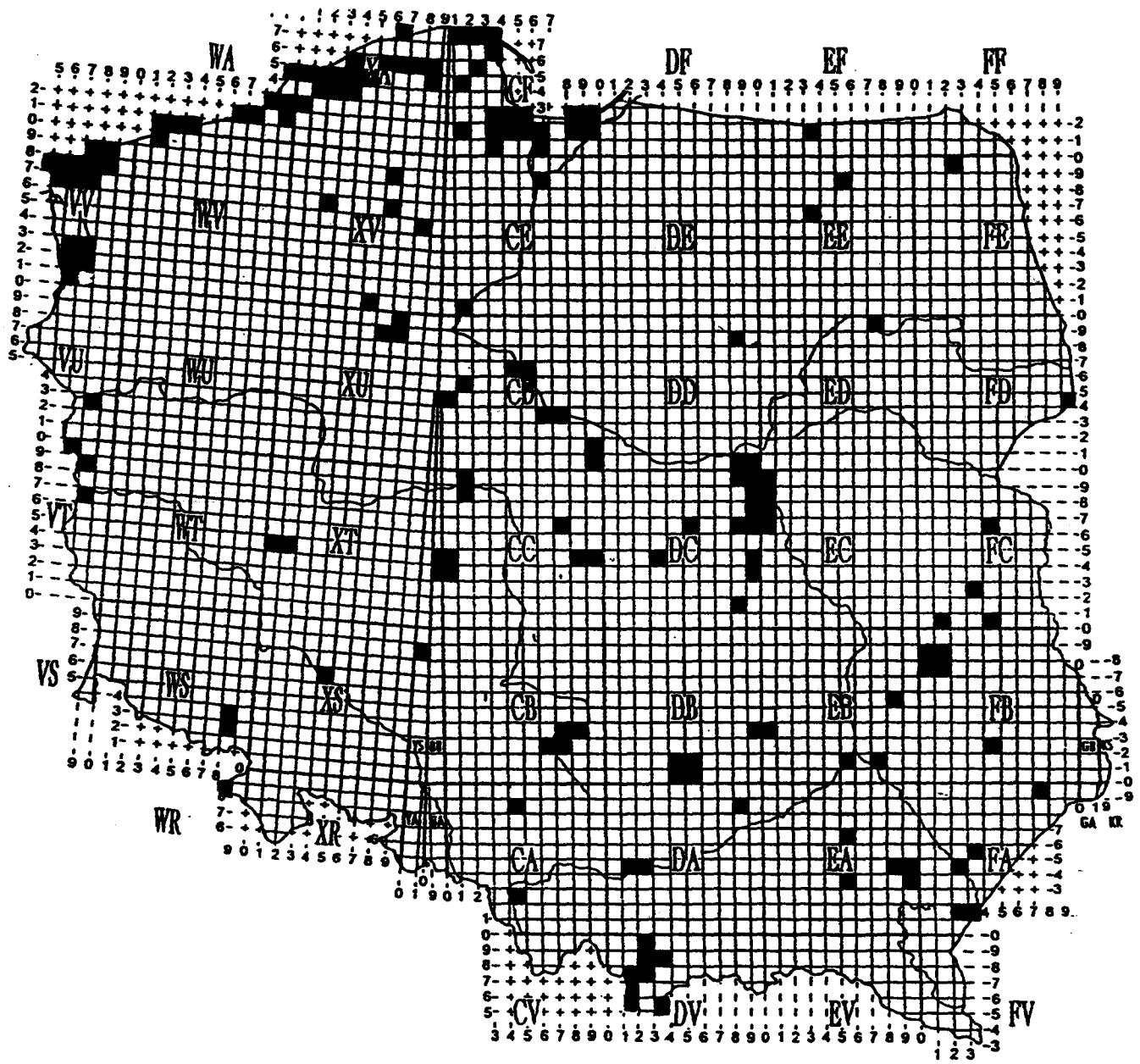
Malaria was endemic in some areas of Poland during the years following World War I. Mosquito studies were necessarily concerned with malaria epidemiology and were almost completely devoted to the Anophelinae, with little attention paid to the remainder of the Culicidae. The first faunistic studies treating the Polish mosquitoes as a whole were those of Sack (1925) in his publication on the Diptera, which mentioned ten mosquito species in the Białowieża National Park.

In the 1930s Tarwid (1934, 1938) published two papers discussing species of both the Anophelinae and the Culicinae occurring in Poland. Several other publications during this period dealt with species from Pomerania, from the vicinity of the city of Gdańsk, and from Upper and Lower Silesia, but none of these included data on collection sites. Up to 1939 the list of mosquitoes encountered in Poland totalled 29 species.

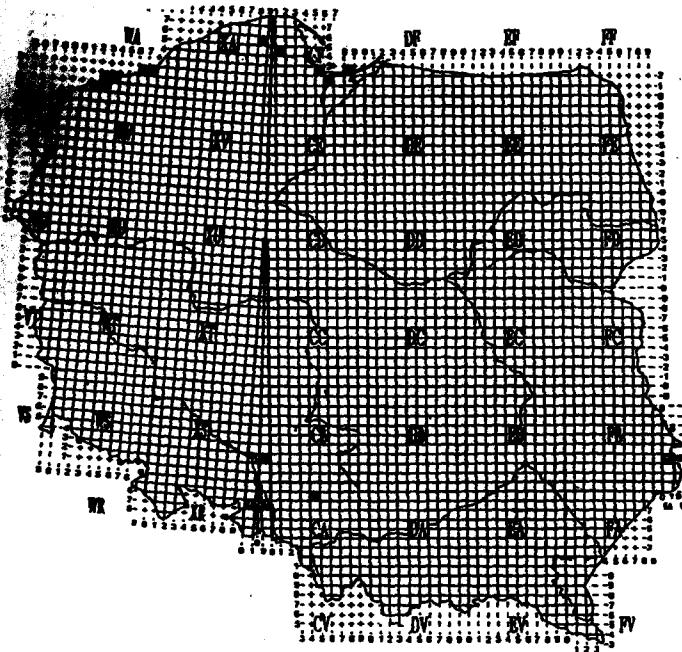
Malaria was again endemic to parts of Poland at the end of World War II and, as after World War I, most attention was paid to the Anopheles Maculipennis Complex, and particularly to *Anopheles atroparvus* (Lachmajer 1949a; 1949b; 1949c, 1950). However, in the 1950s, Tarwid (1952) and Lachmajer (1954) published works dealing with all the known native mosquito species. In addition, reports of other faunistic-ecological studies appeared, when several authors connected with mosquito control, insecticide resistance, or malaria epidemiology, produced papers discussing mosquitoes from other, diverse, points of view.

The first paper to present a comprehensive review of the contemporary state of investigations, with all known references, was by Skierska (1963), who listed 39 mosquito species, with descriptions of their biology, and who made the first attempt to plot their distributions. This still remains the most comprehensive paper on the history of Culicidae investigations in Poland.

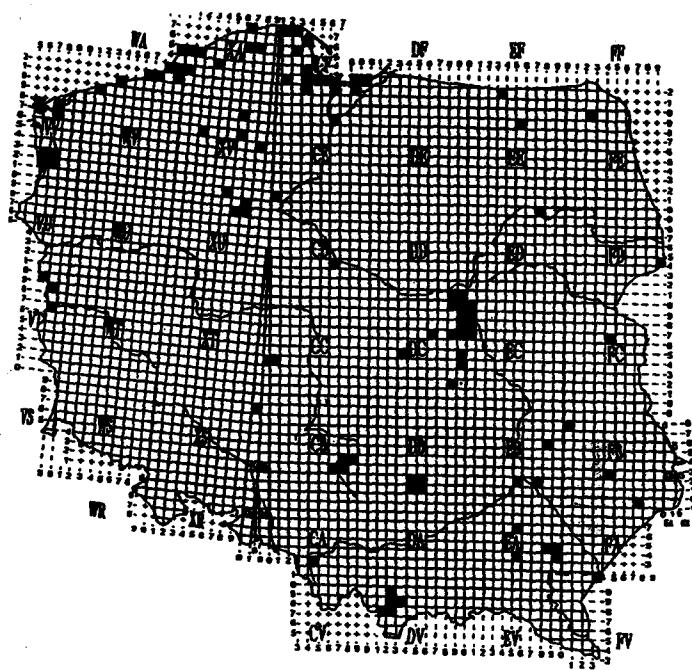
This updated review of the distribution of Culicidae in Poland is the first attempt to present the available data on a 10-km square National Grid System. It must be stated that, for various reasons, distributional data are still incomplete. Some data are difficult to trace and others have been intentionally omitted, as they do not give precise mosquito collection sites. One exception to this rule has been made: the record of *Culex hortensis*, found in the Bieszczady mountains (south eastern Poland) by Wojnarowicz (Skierska 1971), has been placed on the map in the most probable collection site, even though the exact location is not known with certainty. This was done because this is the only record of this species in Poland.



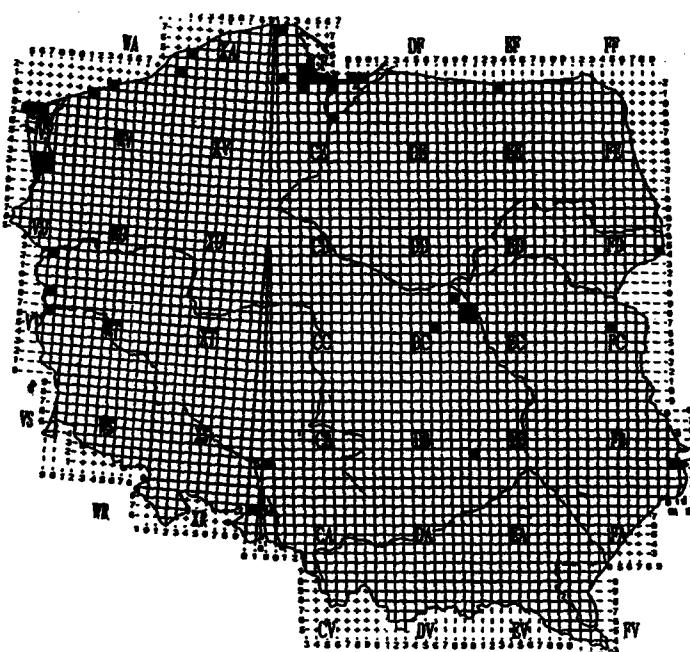
Map of the recorded distribution of all mosquito species.



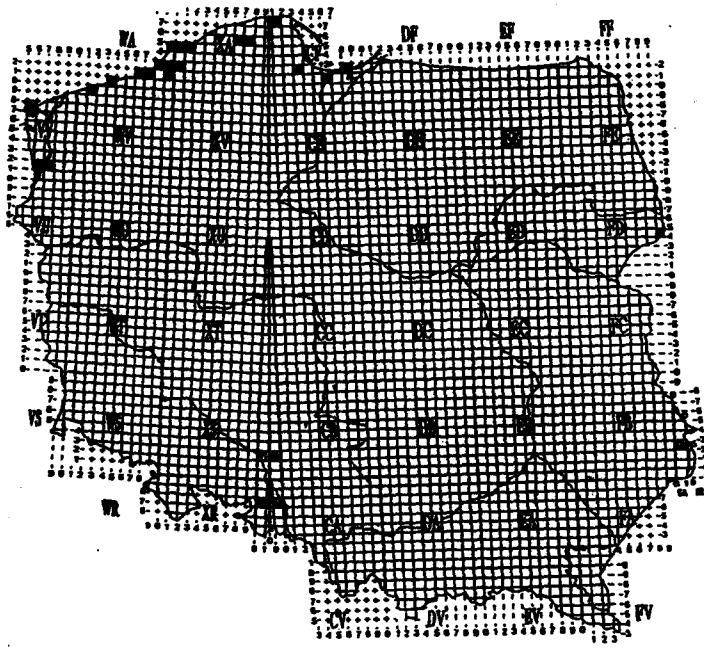
Recorded distribution of *Anopheles atroparvus*.



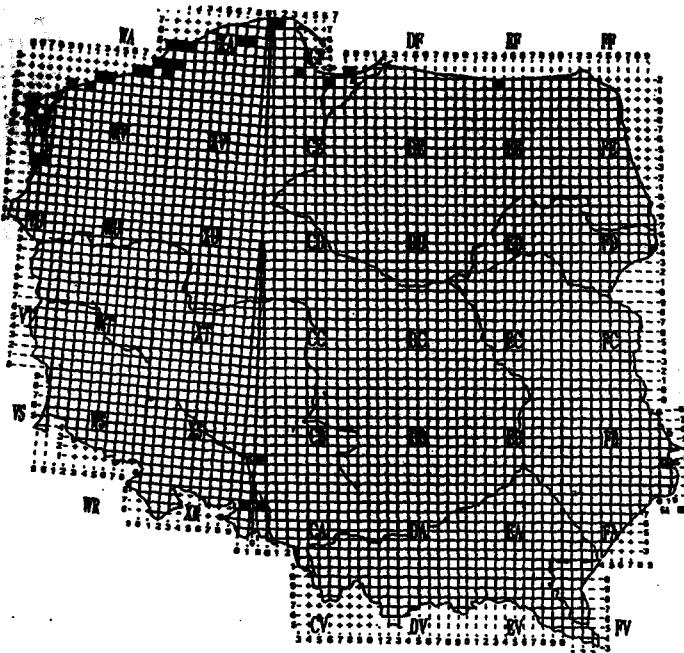
Recorded distribution of *Anopheles maculipennis s.l.*



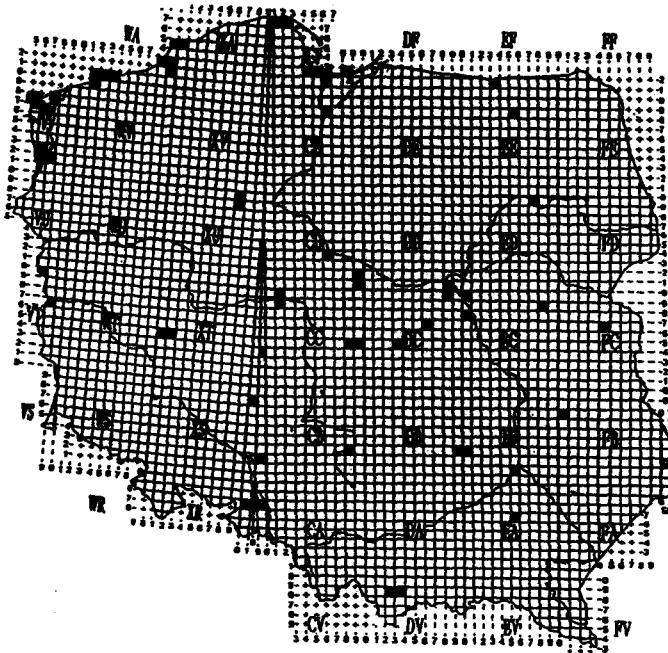
Recorded distribution of *Anopheles claviger*.



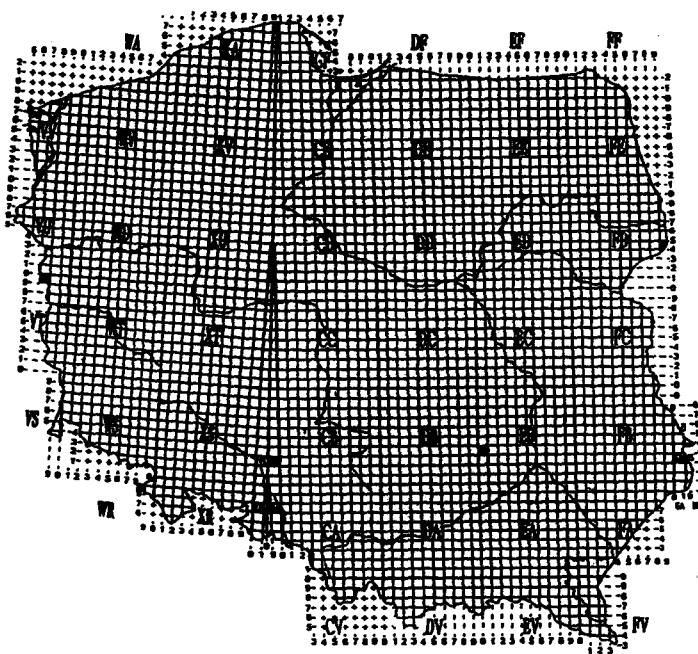
Recorded distribution of *Anopheles maculipennis s.s.*



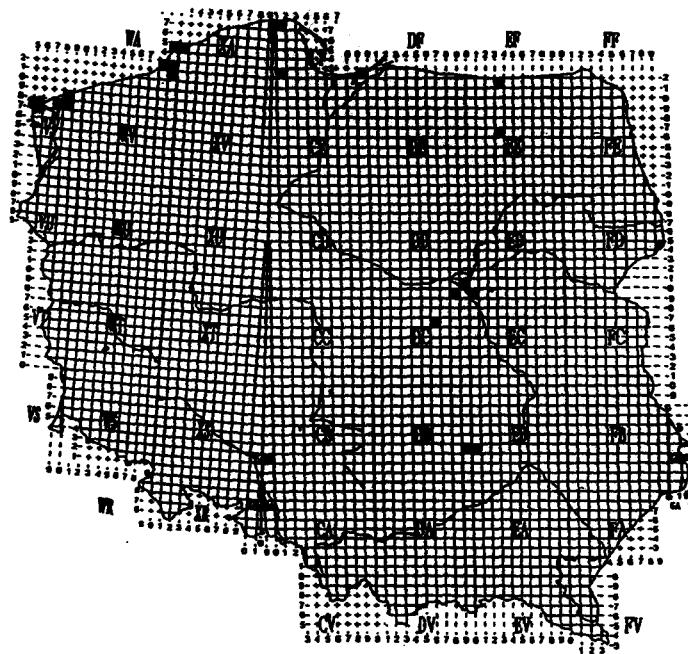
Recorded distribution of *Anopheles messeae*.



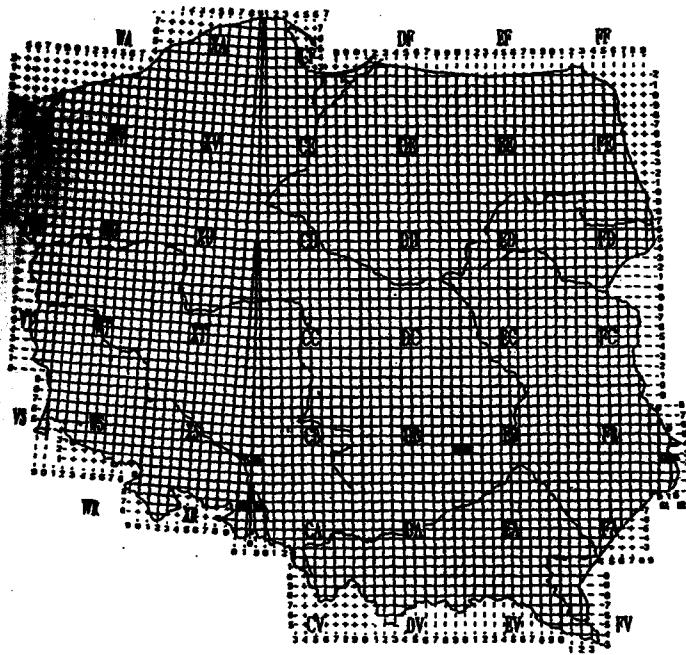
Recorded distribution of *Culiseta annulata*.



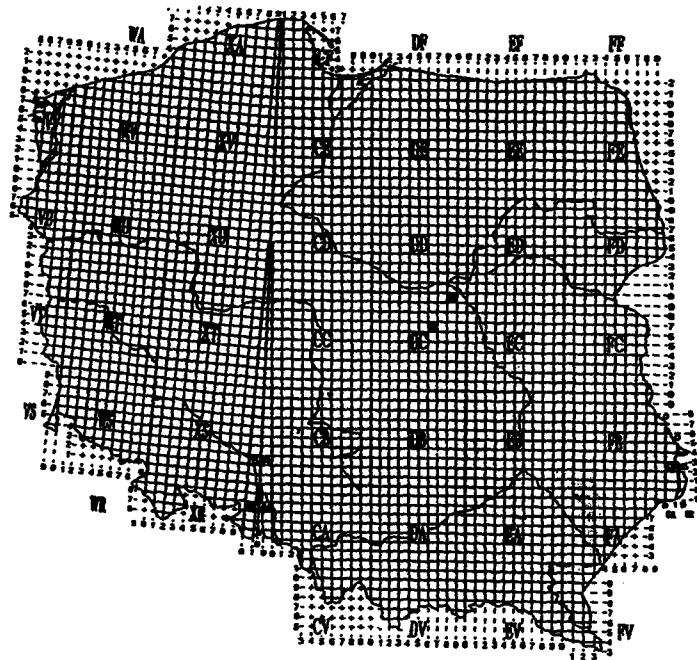
Recorded distribution of *Anopheles plumbeus*



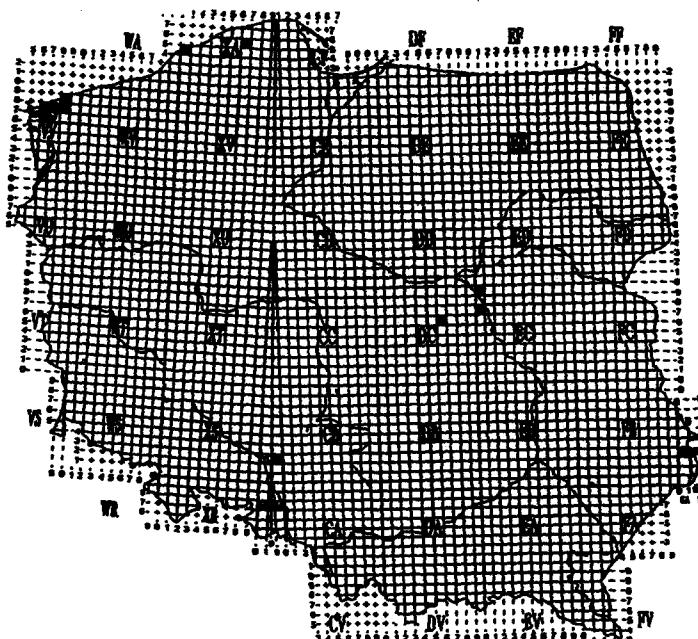
Recorded distribution of *Culiseta alaskaensis*.



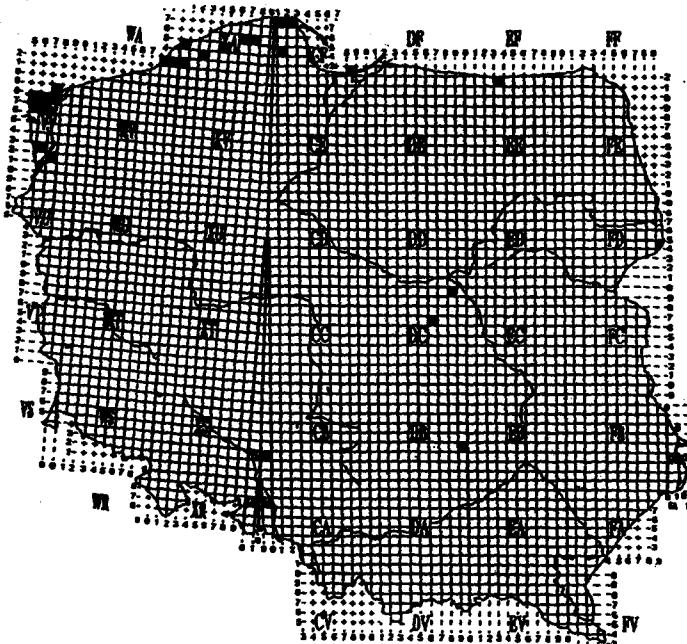
Recorded distribution of *Culiseta glaphyoptera*.



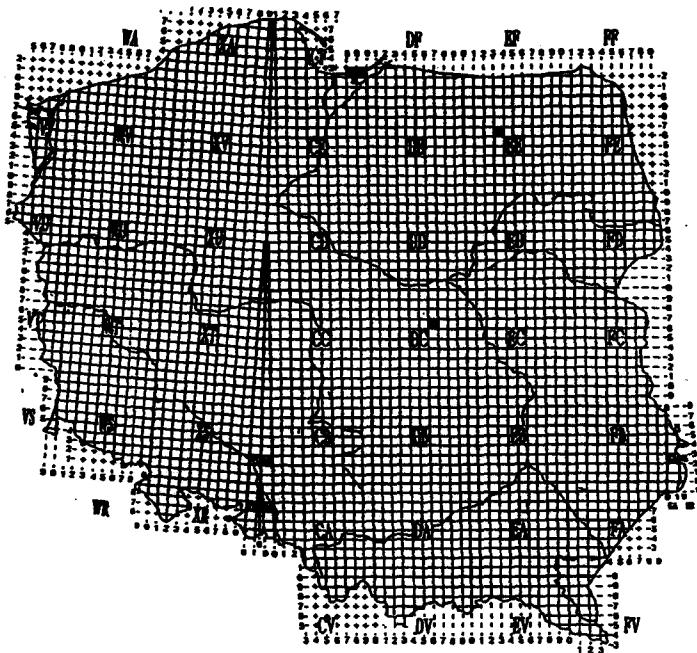
Recorded distribution of *Culiseta fumipennis*.



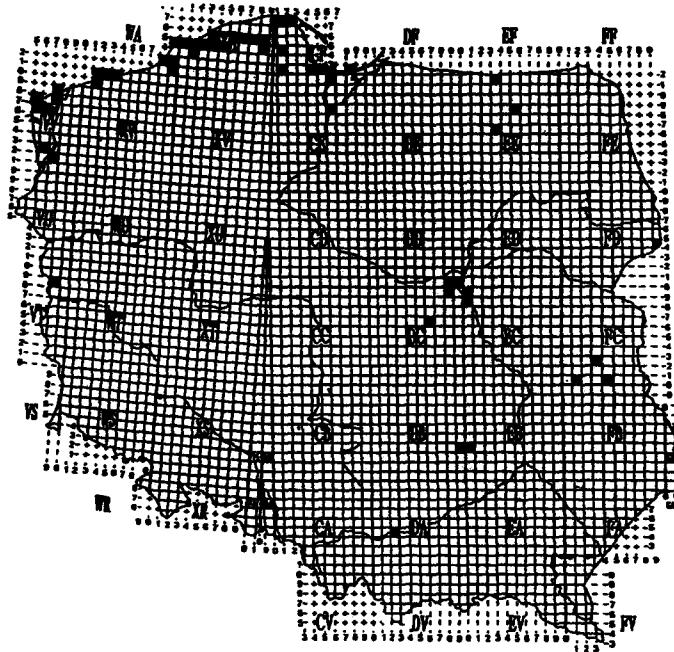
Recorded distribution of *Culiseta subochrea*.



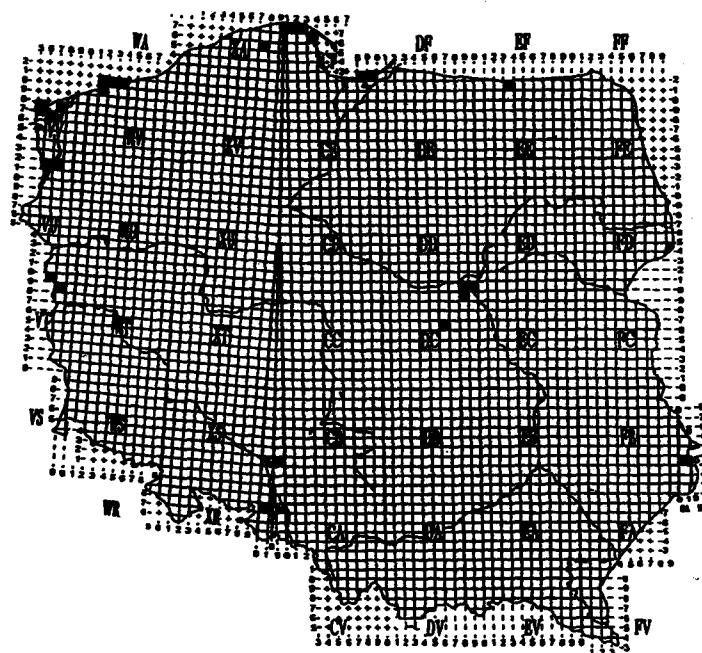
Recorded distribution of *Culiseta morsitans*.



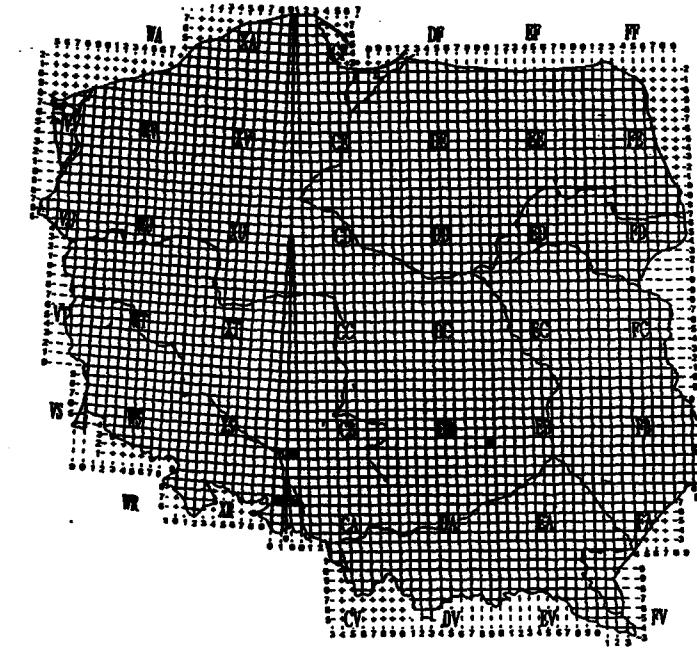
Recorded distribution of *Culiseta ochropoera*.



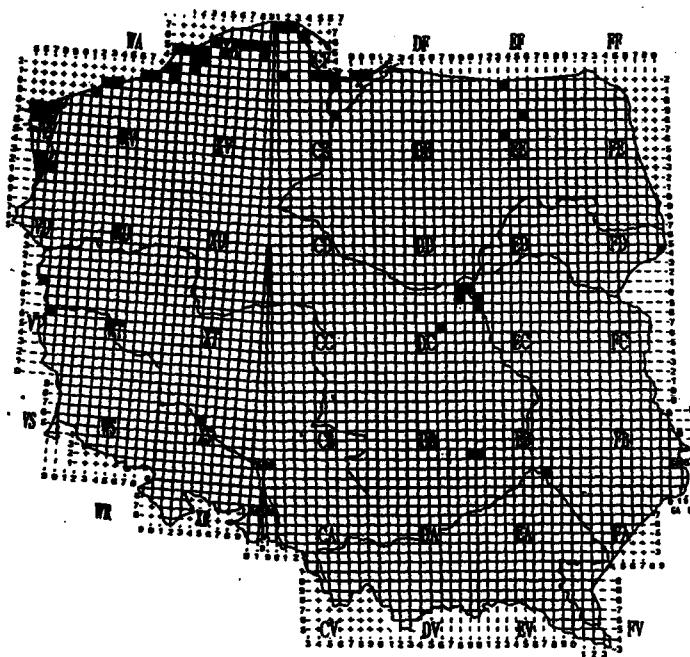
Recorded distribution of *Aedes annulipes*.



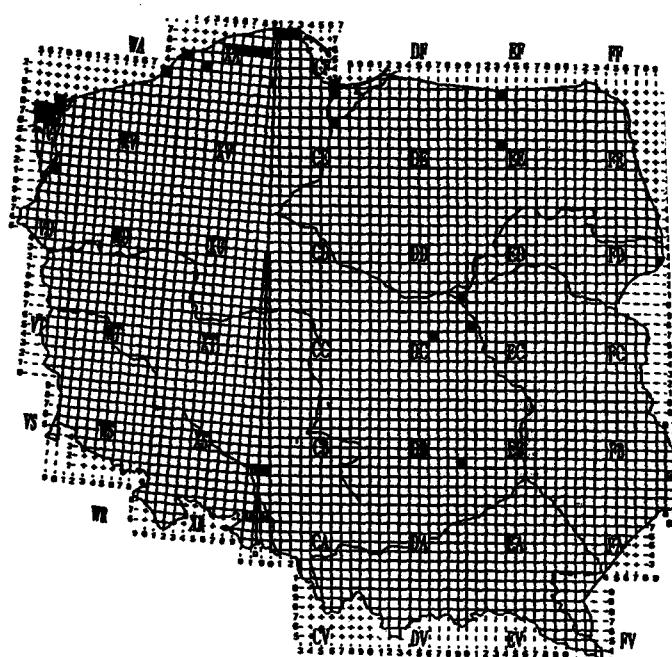
Recorded distribution of *Coquillettidia richiardii*.



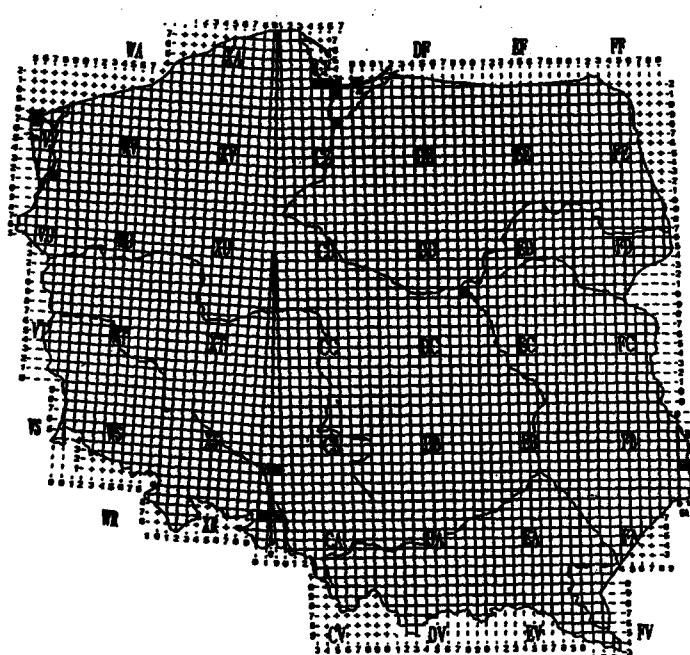
Recorded distribution of *Aedes behningi*.



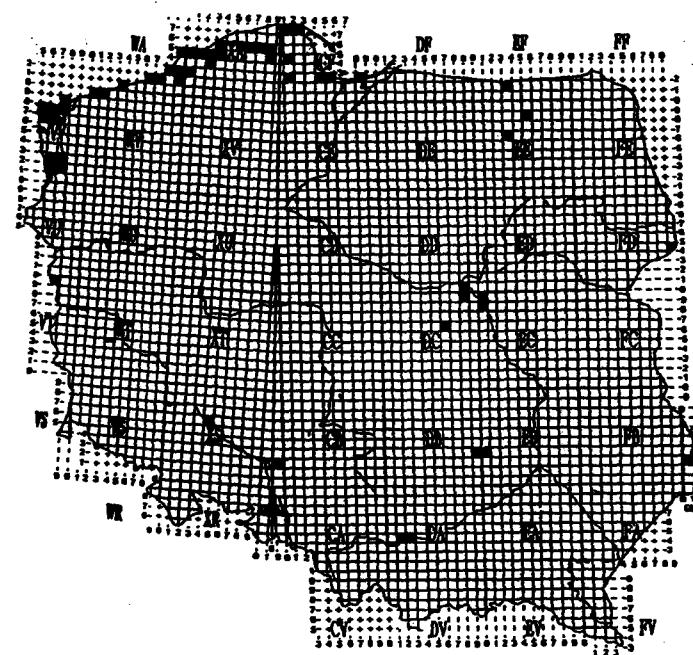
Recorded distribution of *Aedes cantans*.



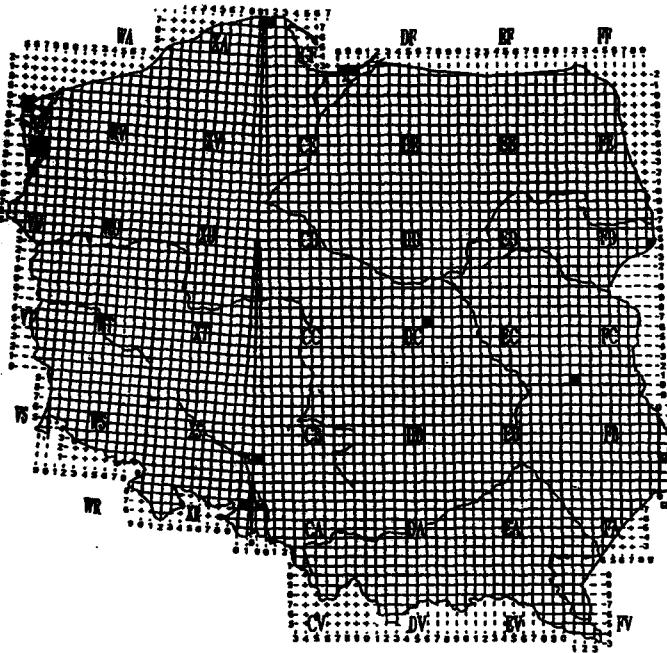
Recorded distribution of *Aedes cataphylla*.



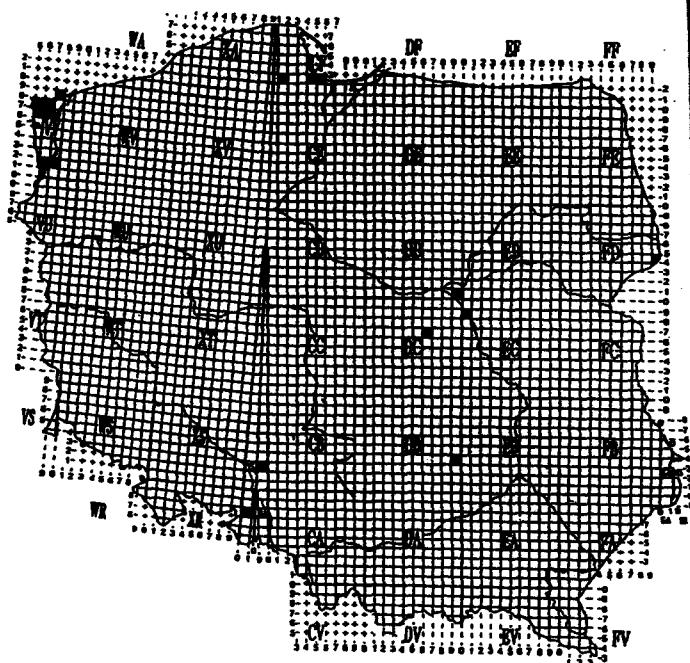
Recorded distribution of *Aedes caspius*.



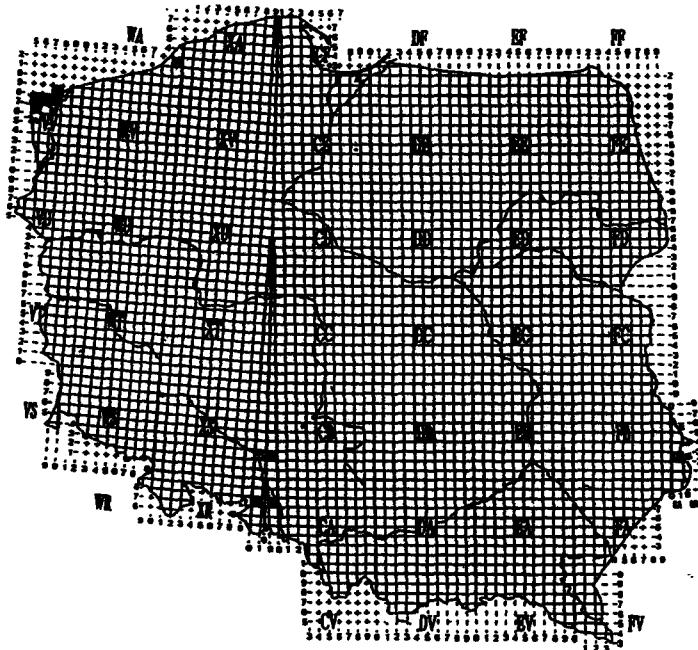
Recorded distribution of *Aedes communis*.



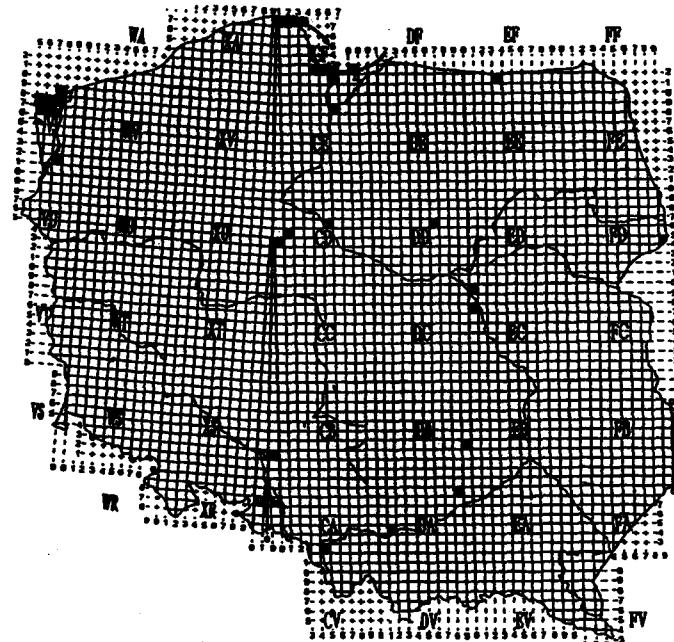
Recorded distribution of *Aedes cyprius*.



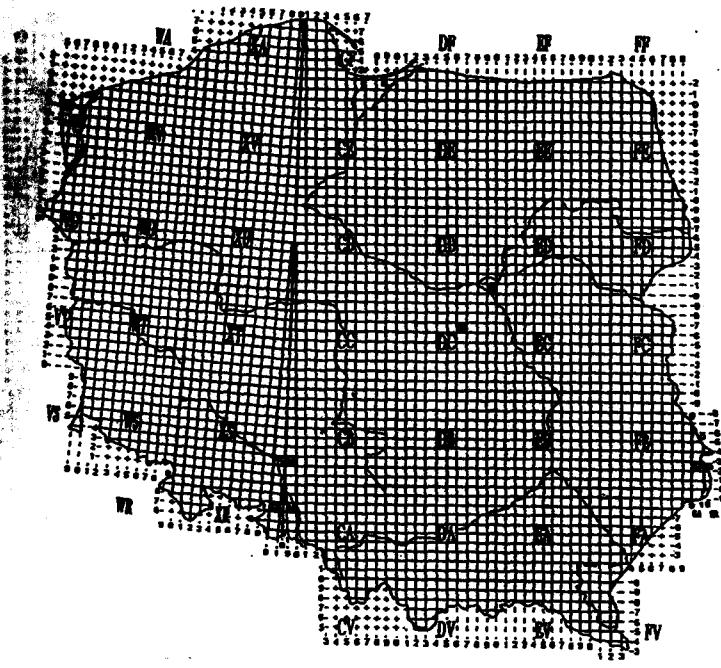
Recorded distribution of *Aedes diantheus*.



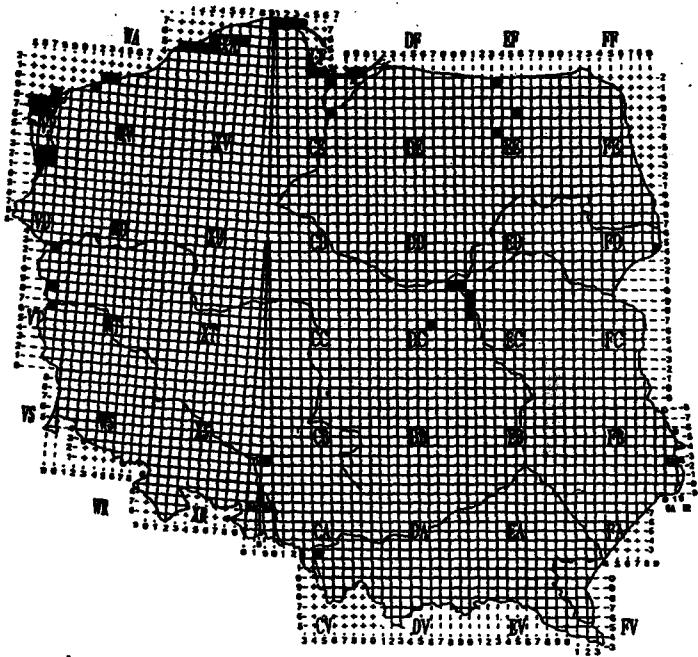
Recorded distribution of *Aedes detritus*.



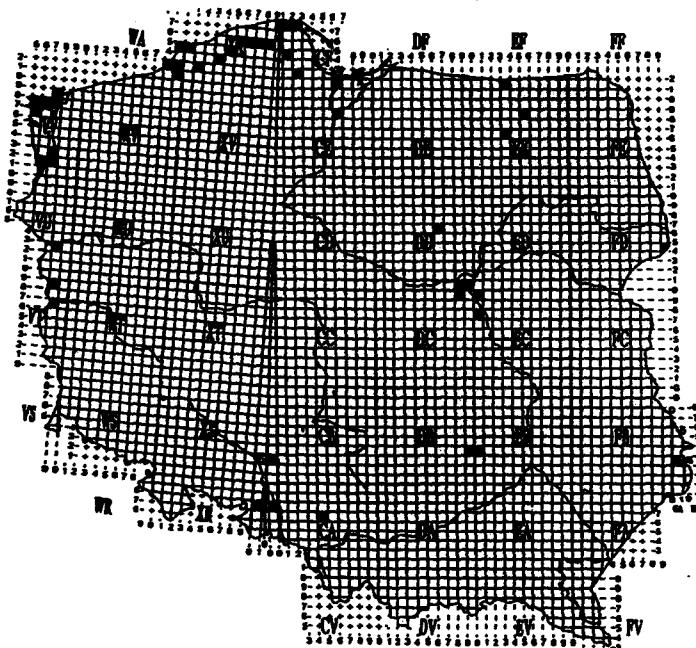
Recorded distribution of *Aedes dorsalis*.



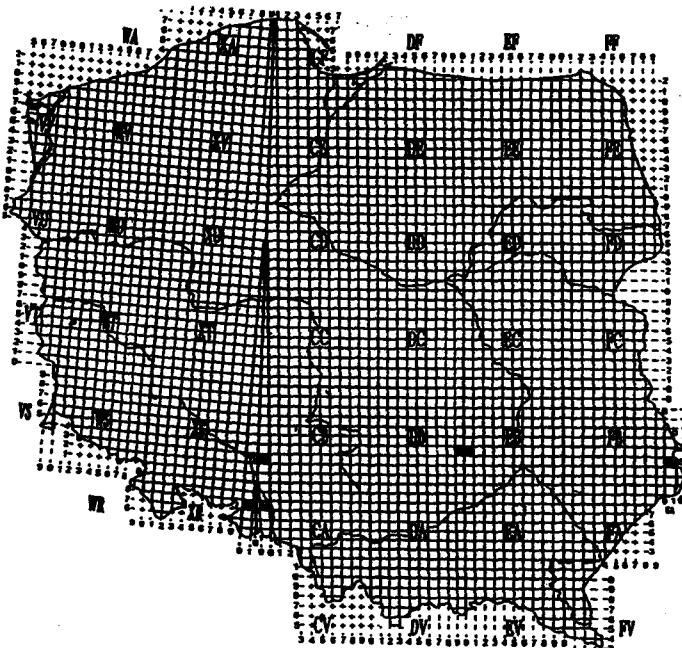
Recorded distribution of *Aedes euedes*.



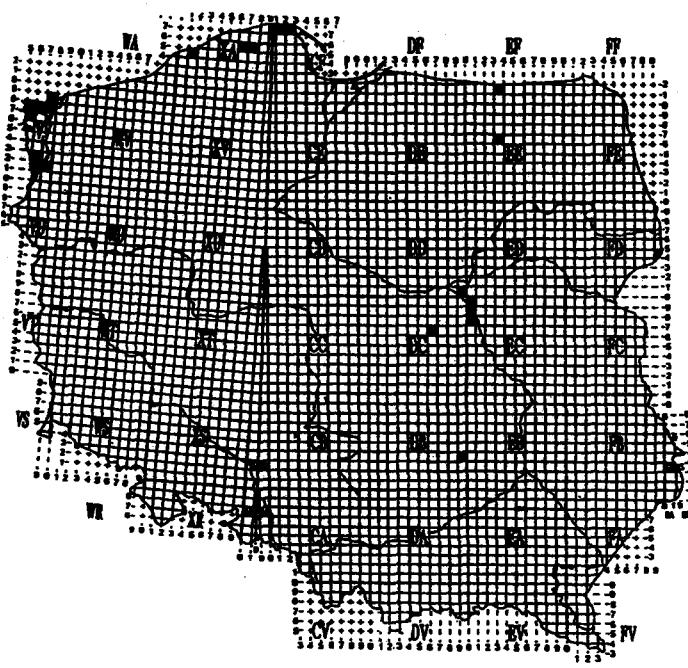
Recorded distribution of *Aedes flavescens*.



Recorded distribution of *Aedes excrucians*.



Recorded distribution of *Aedes hexodontus*.



Recorded distribution of *Aedes intrudens*.

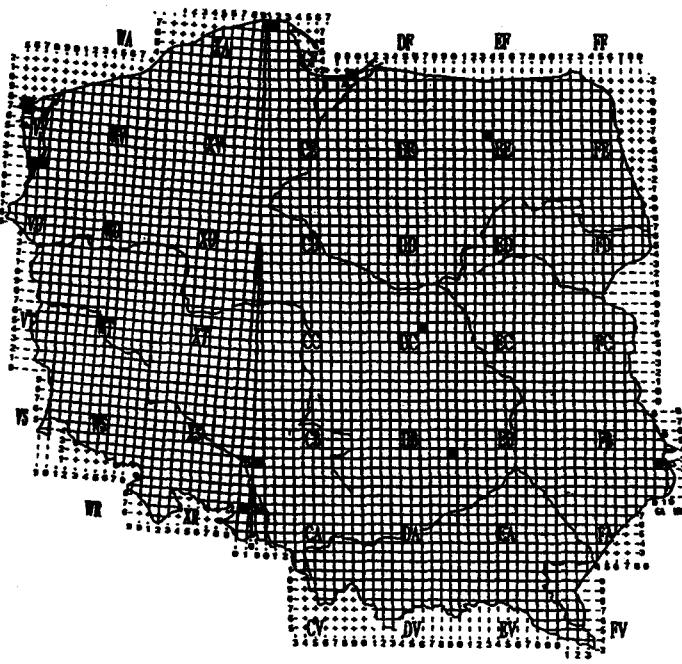
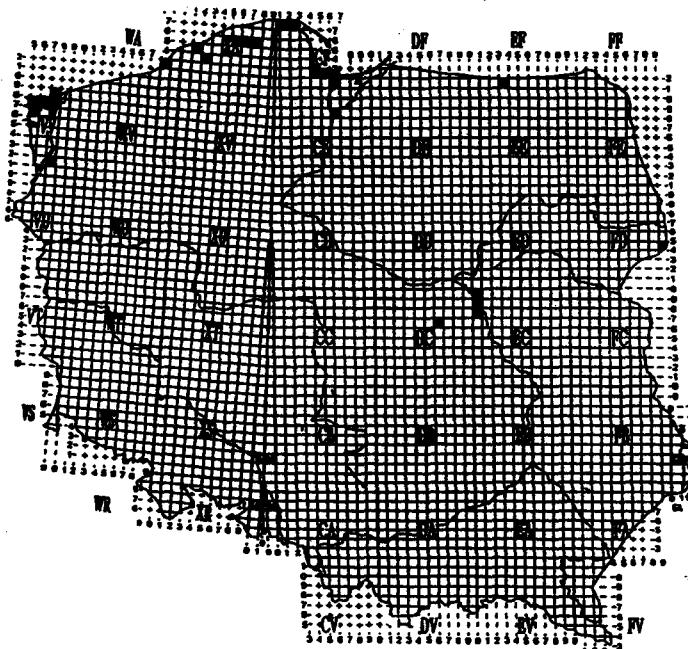
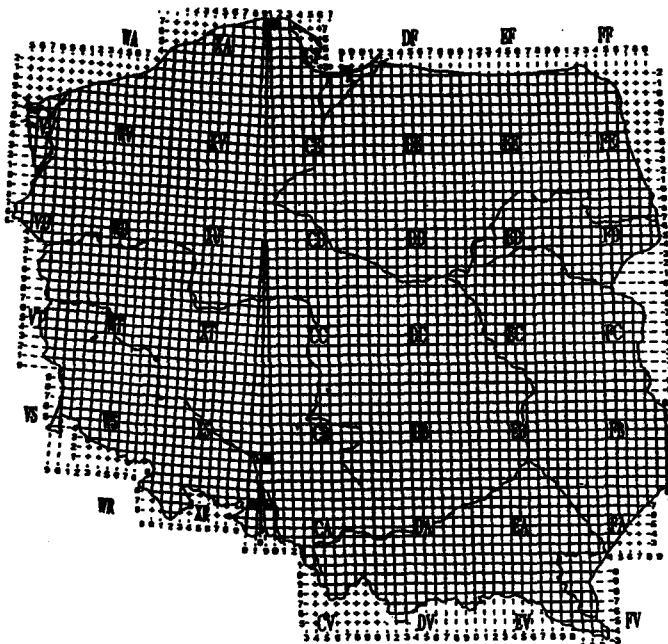


Fig. 32. Recorded distribution of *Aedes nigrinus*.



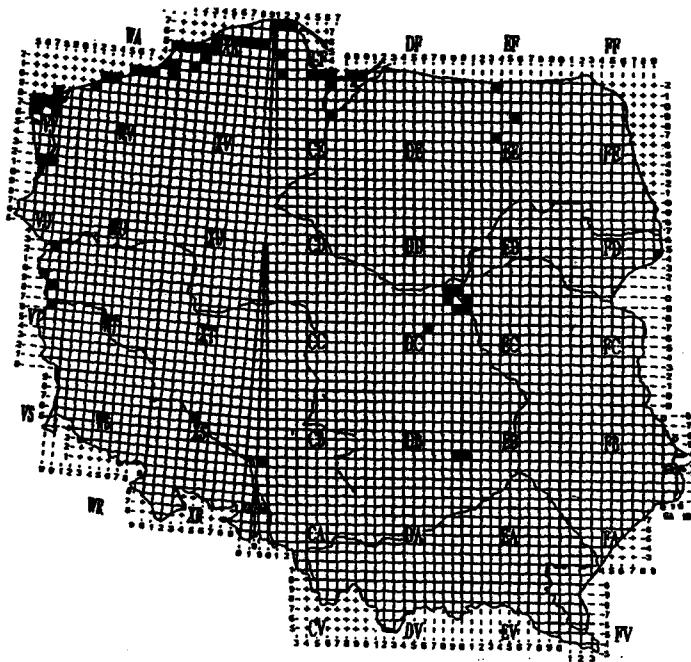
Recorded distribution of *Aedes leucomelas*.



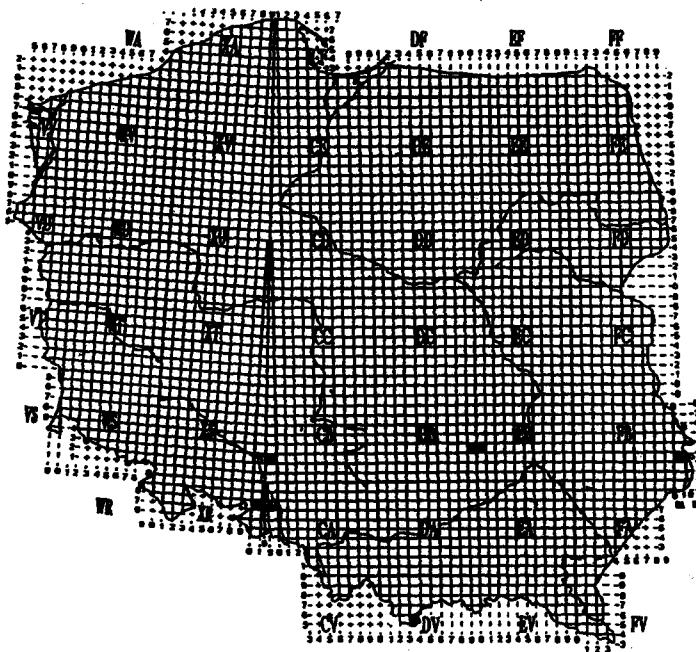
Recorded distribution of *Aedes nigripes*.



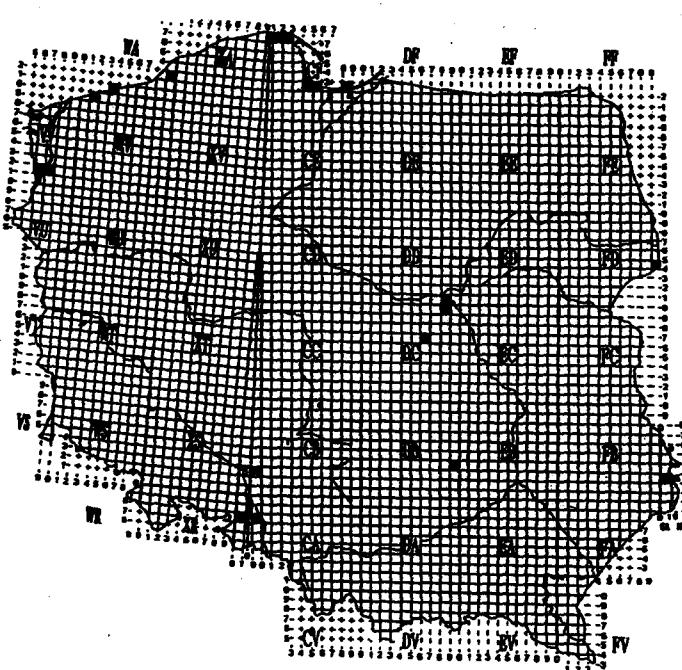
Recorded distribution of *Aedes pionips*.



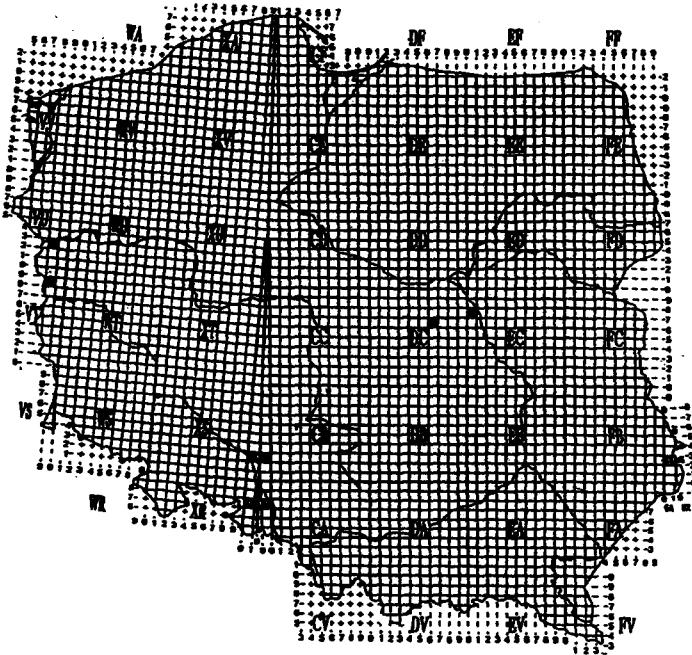
Recorded distribution of *Aedes punctor*.



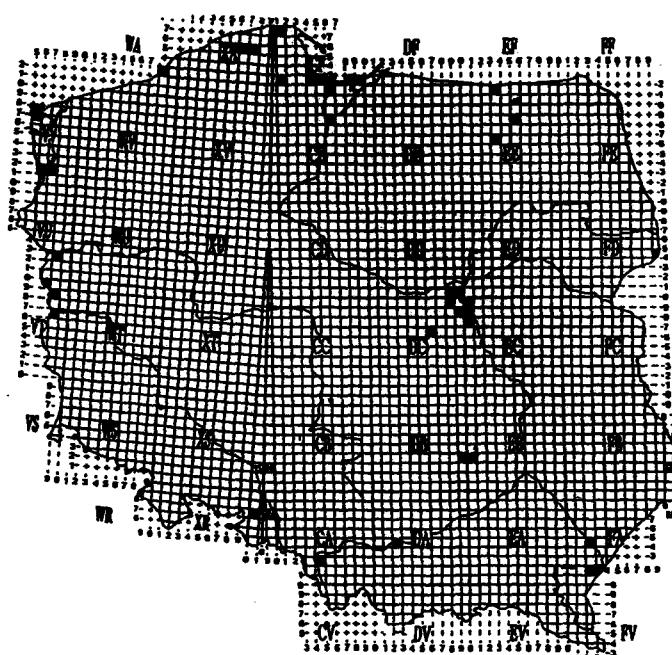
Recorded distribution of *Aedes pullatus*.



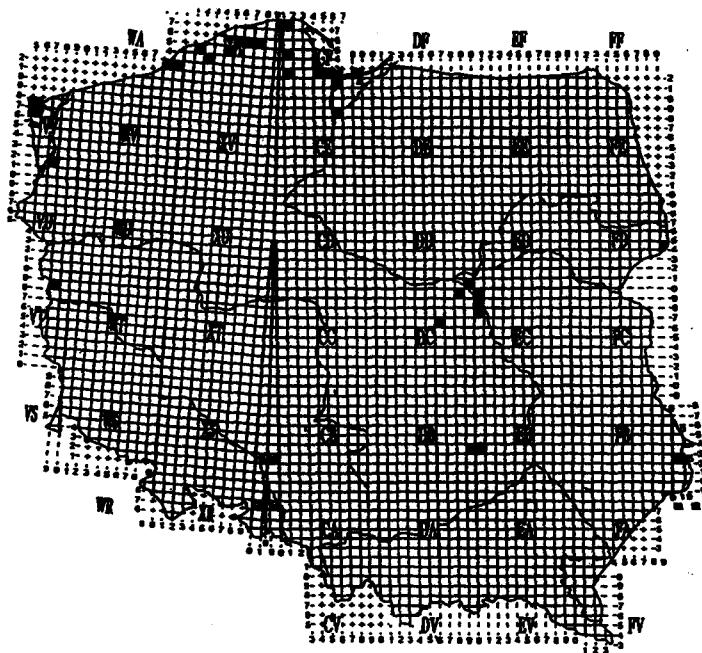
Recorded distribution of *Aedes riparius*.



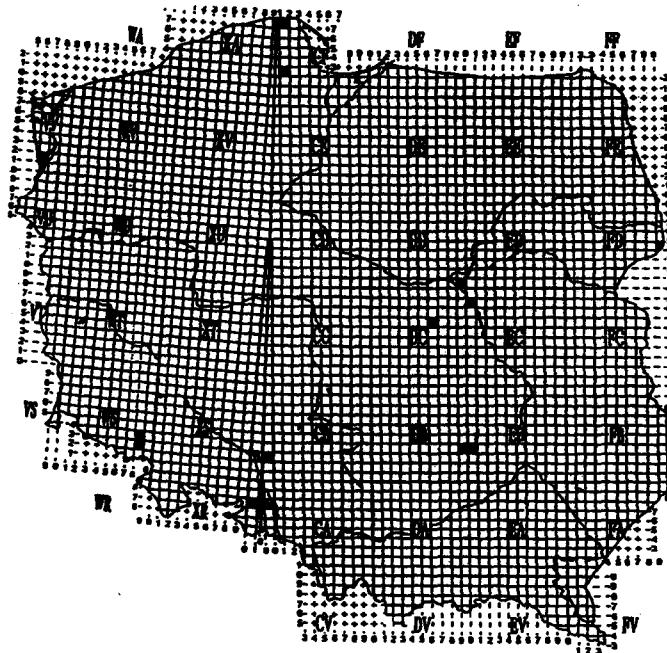
Recorded distribution of *Aedes rusticus*.



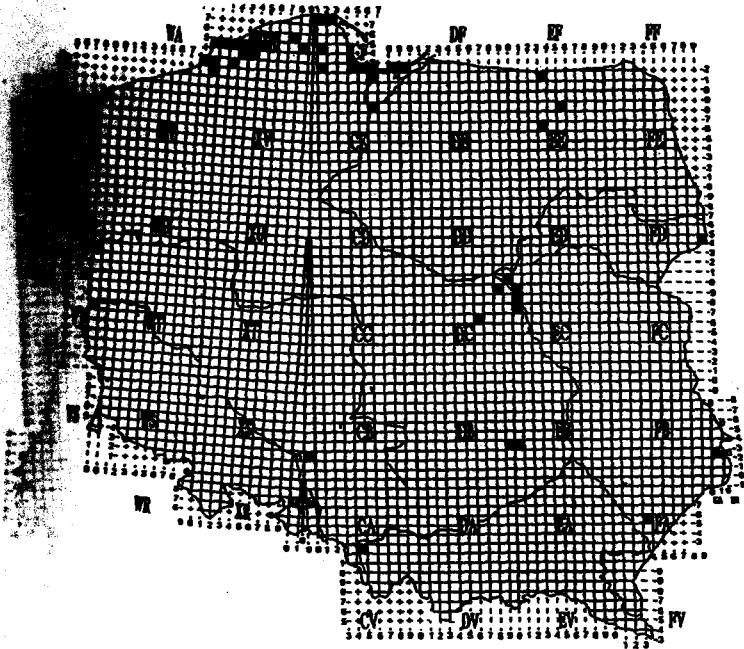
Recorded distribution of *Aedes vexans*.



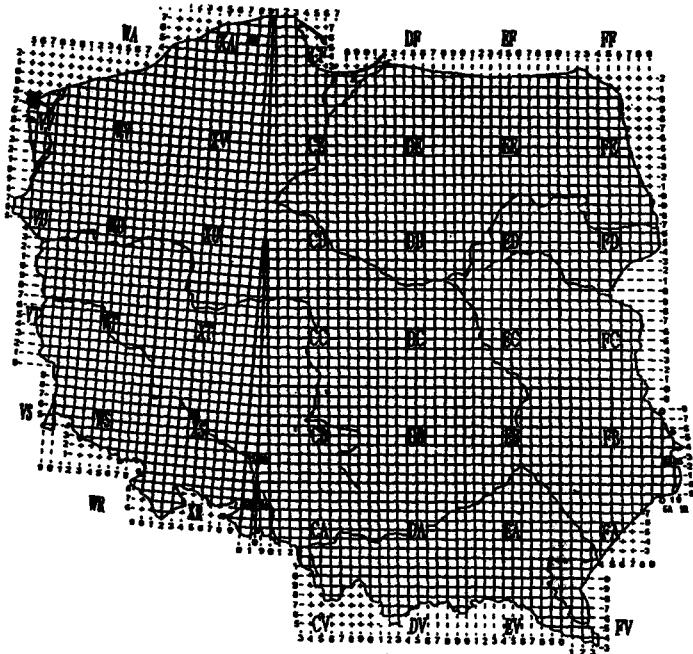
Recorded distribution of *Aedes sticticus*.



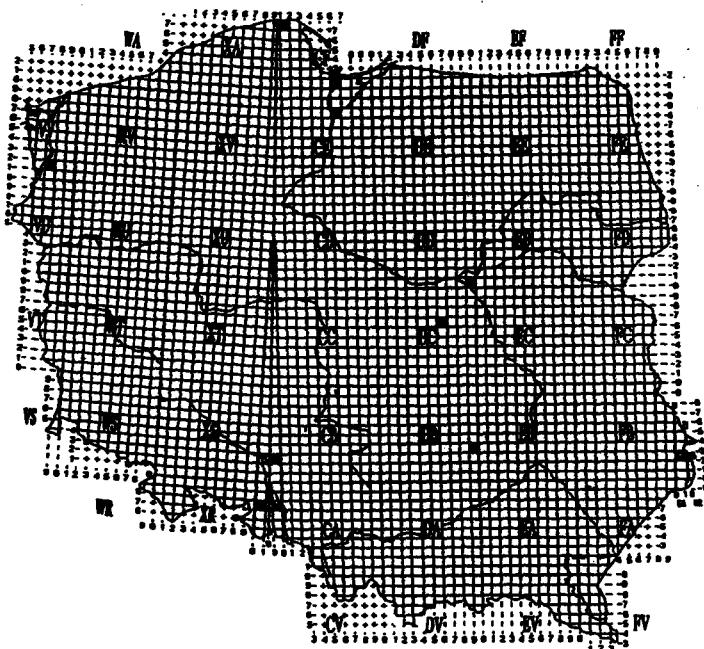
Recorded distribution of *Aedes geniculatus*.



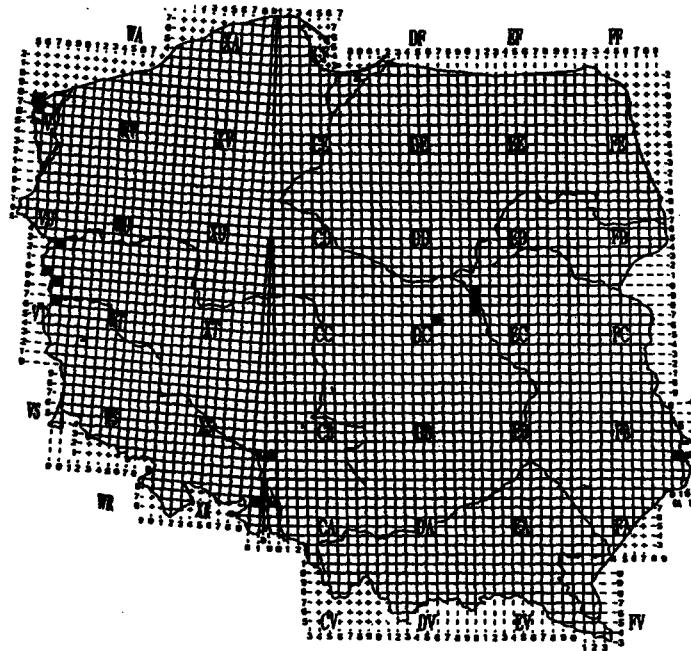
Recorded distribution of *Aedes cinereus*.



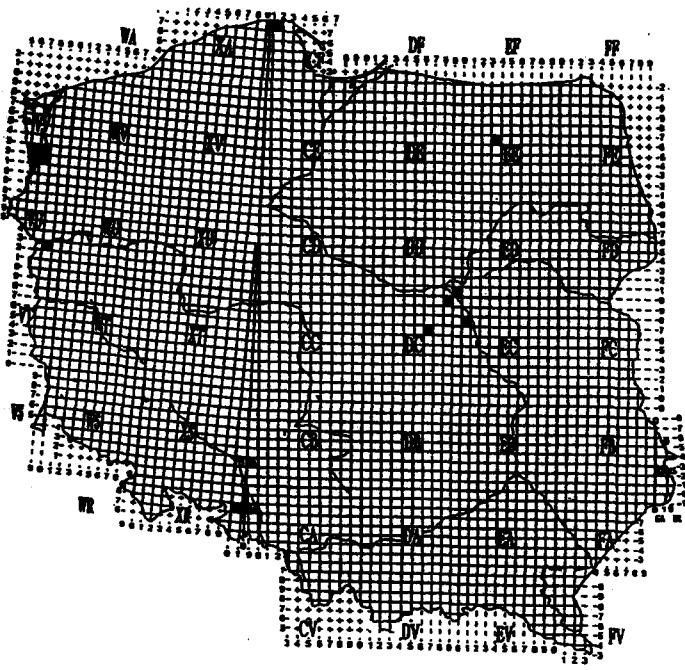
Recorded distribution of *Aedes geminus*.



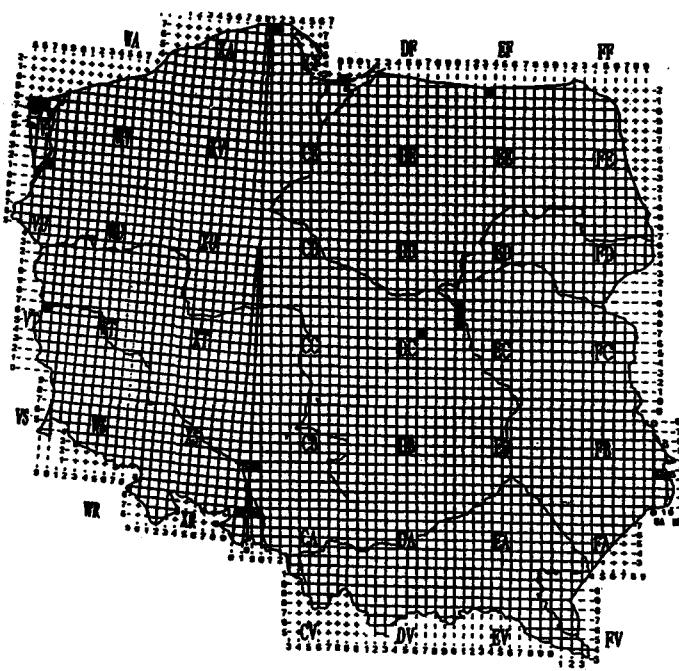
Recorded distribution of *Aedes esoensis* spp. *rossicus*.



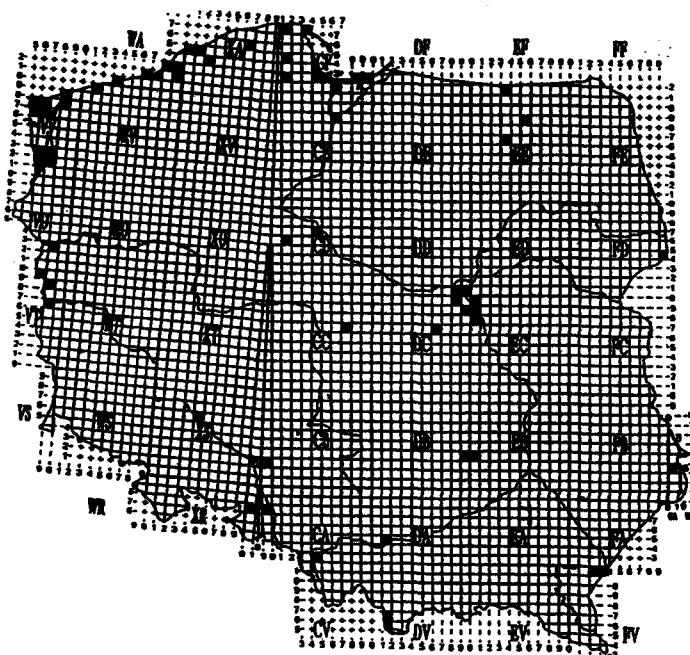
Recorded distribution of *Culex modestus*.



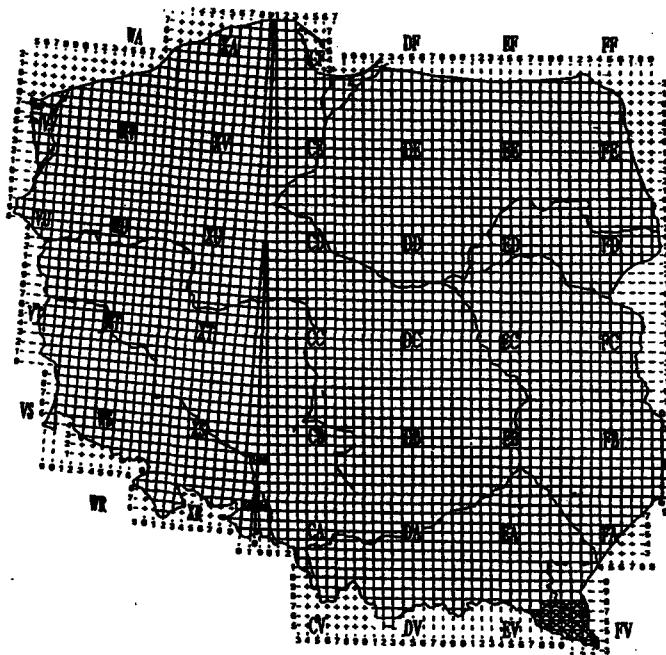
Recorded distribution of *Culex territans*.



Recorded distribution of *Culex torrentium*.



Recorded distribution of *Culex pipiens*.



Recorded distribution of *Culex hortensis*.

X – probably collection sites

A bibliography of distributional publications of Polish mosquitoes

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