

# THE EVOLUTION OF *BLENNOCAMPA PUSILLA* KLUG. PEST AND THE SETTLEMENT OF TREATMENTS WARNING GRAPHICS

## EVOLUȚIA DĂUNĂTORULUI *BLENNOCAMPA PUSILLA* KLUG. ȘI ÎNTOCMIREA GRAFICULUI DE AVERTIZARE A TRATAMENTELOR

**BERNARDIS R., GEORGESCU T., SANDU TATIANA**

University of Agricultural Sciences and Veterinary Medicine Iasi

**Abstracts.** *In the ecological conditions from Iassy we followed the evolution of Blennocampa pusilla Klug. After making different observations it was established that this species has one generation per year. Synthesis tables were made for Blennocampa pusilla Klug. species. The authors created pest biological fiches based on these tables. The biological, ecological and phenological criteria were the factors taken into consideration for settling down the treatments warning graphics. Evolution and warnings graphics for treatments were based on biological, ecological and phenological criteria. One treatment was warned for every year.*

**Rezumat.** *În condițiile ecologice de la Iași s-a urmărit evoluția viespii sucitoare a trandafirului – Blennocampa pusilla Klug. În urma observațiilor făcute s-a stabilit că acest dăunător prezintă o generație pe an. S-au întocmit tabelele de sinteză a speciei Blennocampa pusilla Klug. pe baza cărora s-au întocmit fișele biologice ale dăunătorului. Graficele de evoluție și avertizare tratamentelor s-au întocmit pe baza criteriilor: biologic, ecologic și fenologic. Pe baza datelor criteriilor: biologic, ecologic și fenologic s-au întocmit graficele de avertizare a tratamentelor. S-a avertizat câte un tratament pentru fiecare an.*

### MATERIAL AND METHOD

There were done the synthesis tables for *Blennocampa pusilla* Klug., in which are presented the development stages and their duration, depending by the active temperatures amount.

The warning of the treatments was elaborated using the following criterions:

- 1) *The biological criterion* – which consist in surveillance of the pest biological development;
- 2) *The ecological criterion* – climatic conditions registration: air temperature, air humidity and the rainfalls.
- 3) *The phenological criterion* – surveillance of the growing and flowering stages of the rose.

The data provided by these criterions, were enrolled in a diagram and, from their correlation, resulted the warnings. The evolution diagrams and the warnings (presented in **1, 2 and 3 figures**) issued from the data provided by the three criterions: biological, ecological and phenological one.

The rose wasp *Blennocampa pusilla* Klug. had one year generation. In this situation was applied one chemical treatment.

In the year of **2004**, the treatment was warned between 05 July and 12 July, in the year **2005** between 03 July and 10 July, and in the year **2006** between 01 July and 08 July.

There were used the following chemical products:

- Fastac 10 EC, in 0,02% concentration;
- Talstar 10 EC, in 0,04% concentration;
- Reldan 40 SC, in 0,08% concentration.

## RESULTS AND DISCUSSIONS

In the tables number 1, 2 and 3, are presented the synthesis data for *Blennocampa pusilla* Klug. specie, for 2004-2006 period, which reveal that this specie has one year generation and resist during the winter time in the soil, as a larva.

In the diagrams number 1, 2 and 3, are presented the evolution and the treatments' warnings for *Blennocampa pusilla* Klug., for the three years tacked into consideration.

Table 1

**The synthesis table for *Blennocampa pusilla* Klug.  
in the year 2004, for the Iași county ecological conditions**

Nr. crt.	Biological stage of the development	The first apparition data	The last apparition data	The active temperatures amount $\Sigma(t_n-t_0)$
1.	Poop	27 IV	10 V	52,4
2.	Adult ( $G_1$ )	11 V	16 VI	297,6
3.	Egg	12 VI	19 VI	340,5
4.	Larva	20 VI	winter	679,4

$t_0 = 9^\circ\text{C}$  – the inferior threshold for development, from which the pest begin its activity in the spring

Table 2

**The synthesis table for *Blennocampa pusilla* Klug.  
in the year 2005, for the Iași county ecological conditions**

Nr. crt.	Biological stage of the development	The first apparition data	The last apparition data	The active temperatures amount $\Sigma(t_n-t_0)$
1.	Pupă	28 IV	19 V	95,4
2.	Adult ( $G_1$ )	20 V	17 VI	310,4
3.	Ou	15 VI	30 VI	520,2
4.	Larvă	31 VI	iernează	720,0

$t_0 = 9^\circ\text{C}$  – the inferior threshold for development, from which the pest begin its activity in the spring

Table 3

The synthesis table for *Blennocampa pusilla* Klug.  
in the year 2006, for the Iași county ecological conditions

Nr. crt.	Biological stage of the development	The first apparition data	The last apparition data	The active temperatures amount $\Sigma(t_n - t_0)$
1.	Pupă	24 IV	11 V	72,6
2.	Adult ( $G_1$ )	12 V	16 VI	210,7
3.	Ou	14 VI	24 VI	480,1
4.	Larvă	25 XI	iernează	610,2

$t_0 = 9^\circ\text{C}$  – the inferior threshold for development, from which the pest begin its activity in the spring

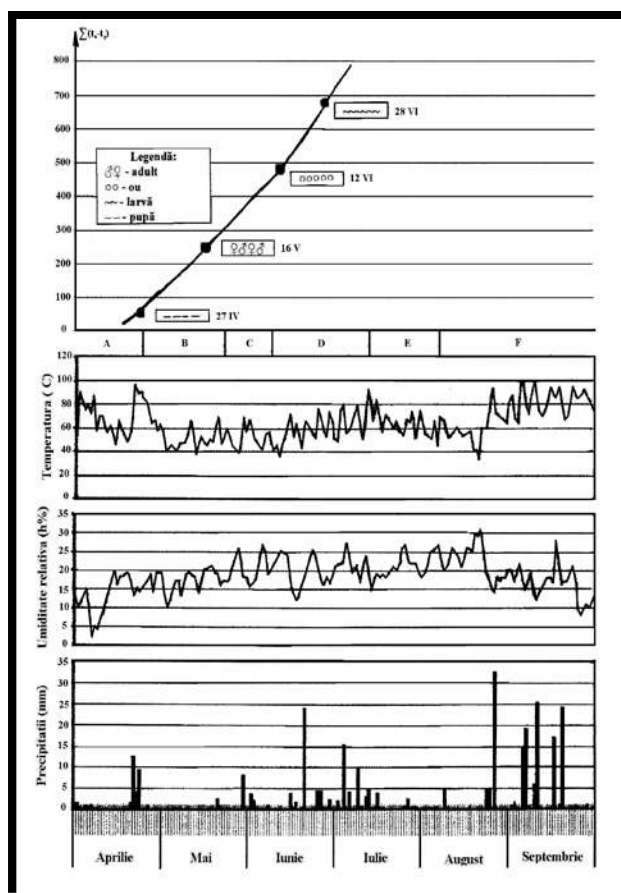


Fig. 1. THE EVOLUTION DIAGRAM AND THE TREATMENTS' WARNINGS FOR THE  
BLENNOCAMPA PUSILLA KLUG. SPECIE, IN THE YEAR 2004

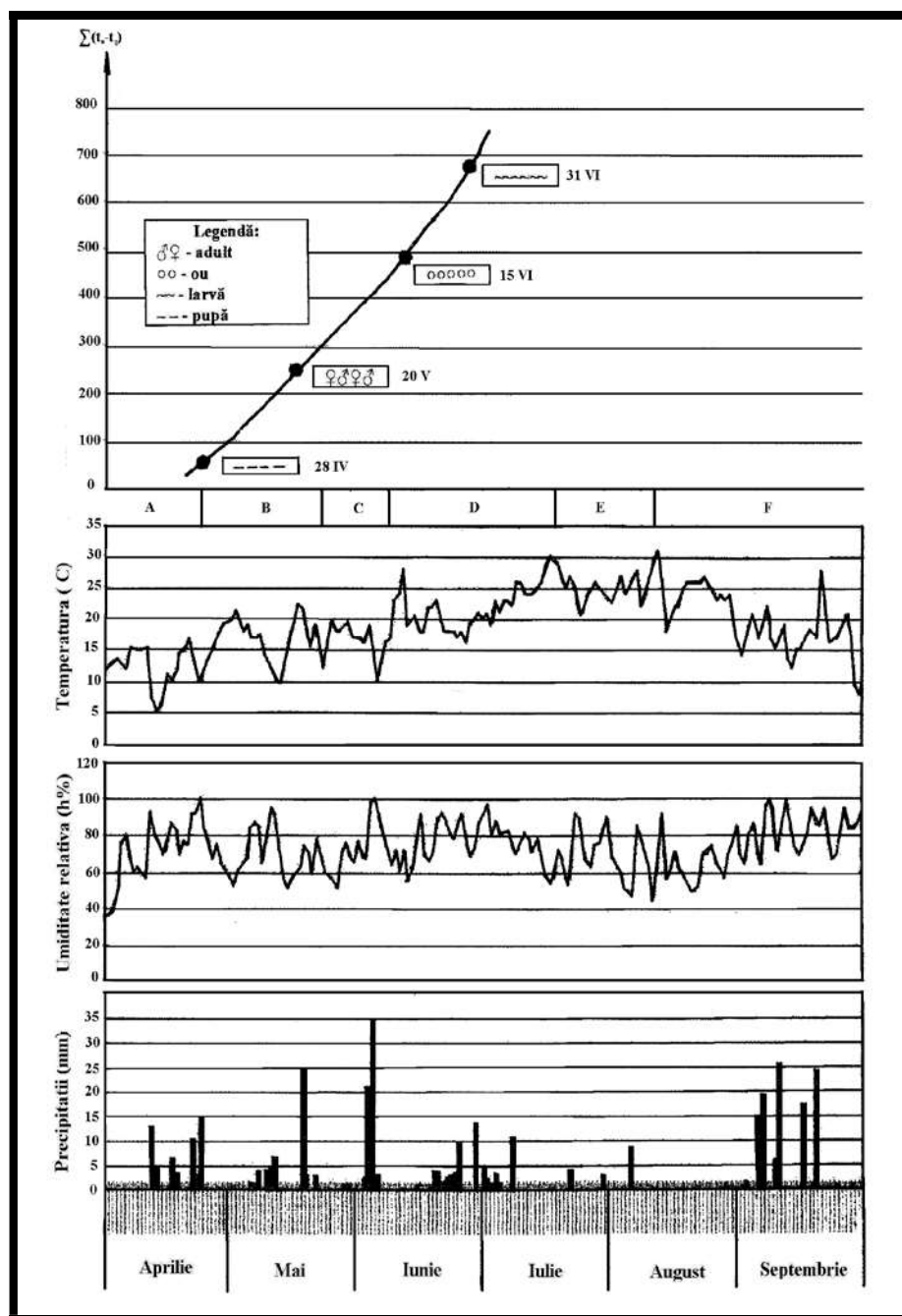


Fig. 1. THE EVOLUTION DIAGRAM AND THE TREATMENTS' WARNINGS FOR THE *BLENNOCAMPA PUSILLA* KLUG. SPECIE, IN THE YEAR 2005

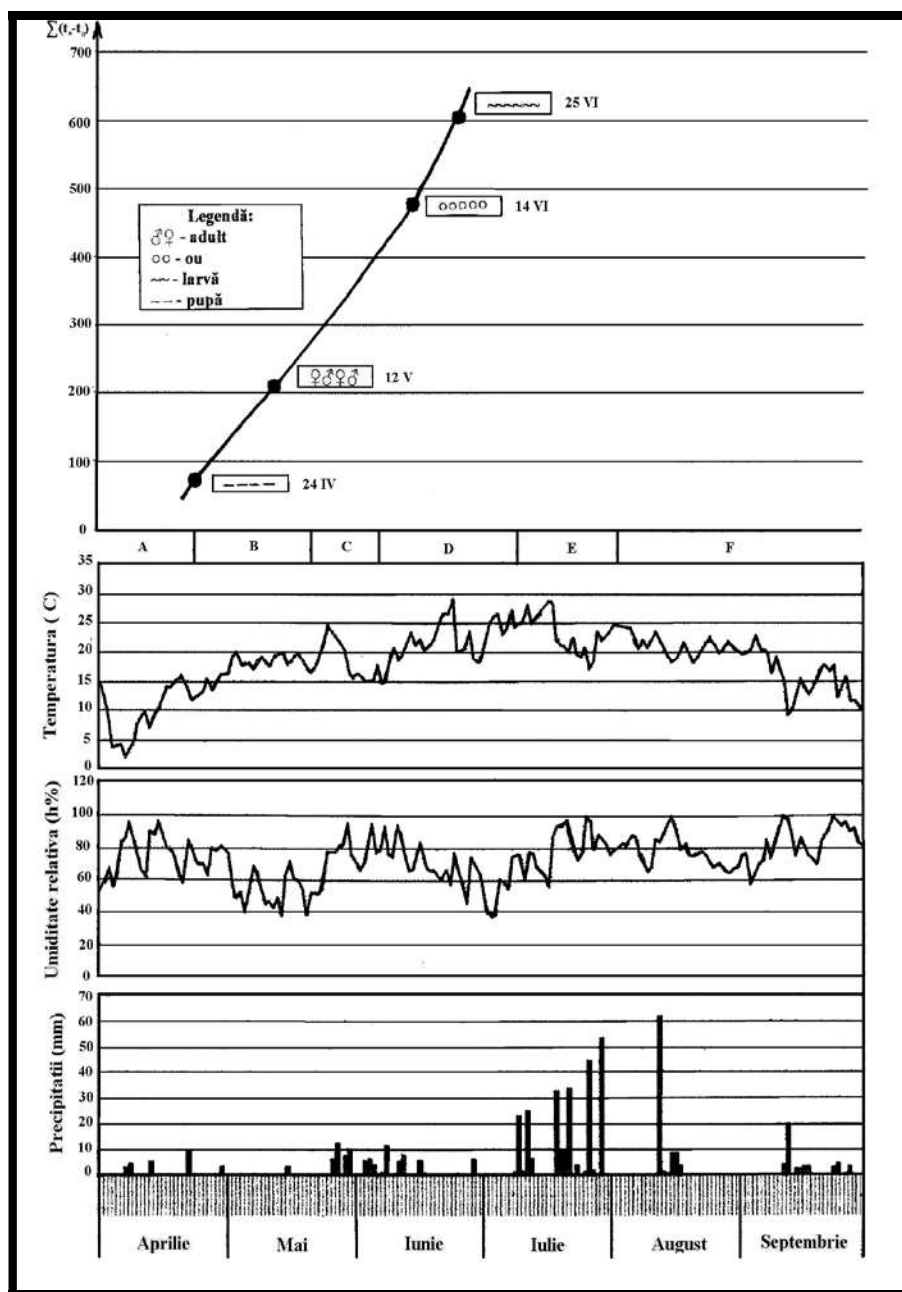


Fig. 3. THE EVOLUTION DIAGRAM AND THE TREATMENTS' WARNINGS FOR THE *BLENNOCAMPA PUSILLA* KLUG. SPECIE, IN THE YEAR 2006

## CONCLUSIONS

In the ecological conditions of the Iassy county, the roses' wasp *Blennocampa pusilla* Klug. has one generation, that evolved as it follows:

- $G_I$  = 11 May – 20 June;

The rebuttal of *Blennocampa pusilla* Klug. specie, based on the warned treatments application, according to the pest evolution and in correlation with the temperature, humidity of the air and the rainfalls.

Tacking into account the biological and ecological data obtained, was warned a treatment for the first generation  $G_I$ .

In the year **2004**, the treatment was warned as it follows:

T1 = 05 July – 21 June for  $G_I$  generation;

In the year **2005**, the treatments period was:

T1 = 03 July – 10 July for  $G_I$ ;

In the year **2006**, the treatment period was:

T1 = 01 July – 08 June for  $G_I$ .

The treatment for every generation were based on organophosphoric and pyretroides products:

- Fastac 10 EC in concentration by 0,02%;
- Talstar 10 EC, in concentration by 0,04%;
- Reldan 40 SC, in concentration by 0,08%.

## REFERENCES

1. Baicu T., Săvescu A., 1986 –*Sisteme de combatere integrată a bolilor și dăunătorilor pe culturi*. Editura Ceres, București.
2. Hatman M., Bobeș I., Lazăr Al., Perju T., Săpunaru T., 1986 –*Protecția plantelor cultivate*. Editura Ceres, București.
3. Săvescu A., 1960 –*Elemente noi cu privire la stabilirea optimului ecologic al dezvoltării câtorva specii de insecte*. Probleme actuale de biologie și științe agricole. Volum omagial G. Ionescu Sisești, București.
4. Săvescu A., 1965 –*Constantele dezvoltării insectelor polivoltine și importanța lor pentru teoria și practica protecției plantelor*. Analele Secției de Protecția plantelor, vol. III, București.
5. Săvescu A., Rafailă C., 1978 –*Proгноza în protecția plantelor*. Editura Agrosilvică, București.
6. X X X, 1980 –*Metodici de prognoză și avertizare a tratamentelor împotriva bolilor și dăunătorilor plantelor de cultură*. Ministerul Agriculturii, București.
7. X X X, 2004 –*Codexul produselor de uz fitosanitar omologate pentru a fi utilizate în România*. Ministerul Agriculturii, Pădurilor și Dezvoltării Rurale, București.