INTERNATIONAL YEAR OF PLANT HEALTH 2020

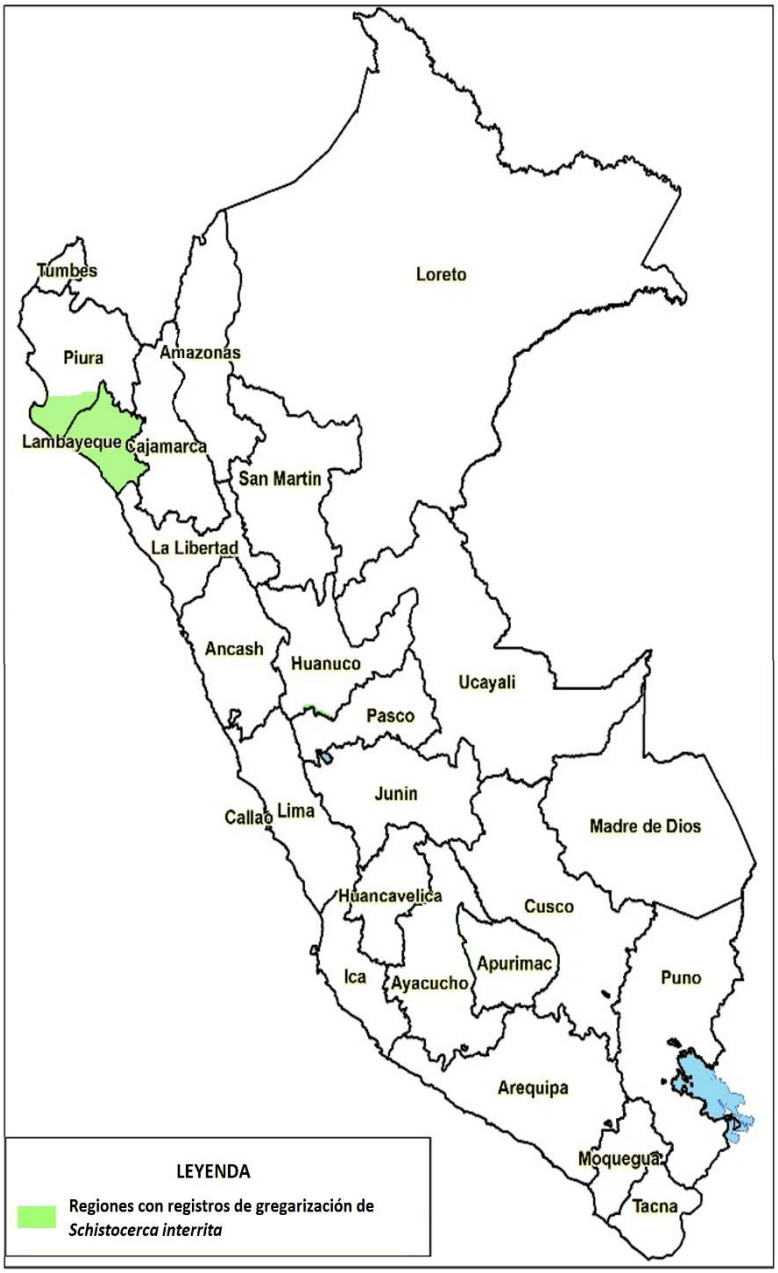
GICSV
Grupo Interamericano de Coordinación en Sanidad Vegetal
Inter-American Coordinating Group in Plant Protection

Schistocerca interrita Scudder, 1899

Photo of a *Schistocerca interrita solitary adult*

Photo of a *Schistocerca interrita gregarious adult*

The first report of an occurrence of a plague of locusts in Peru dates back to 1578 and is mentioned by historian María Rostworowski, who, according to a quotation in the journal *Desastres y Sociedad*, published an article in the newspaper *El Comercio* in 1893 (Note: Maria R, was born in 1915), in which, based on historical records from the beginning of the colony, she shows reports of the appearance of the plague of locusts following the torrential rain that occurred between February and April that year, in what is today the Lambayeque Region.



According to the data available about El Niño, it was this climatological event which caused this period of torrential rainfall.

This would be the first of various reports of this type of plague, and judging by the geographical location, it could be argued that *Schistocerca interrita* was the species involved in said gregarigenous event.

This species develops mainly on the coastal strip of the country, adjacent to the western side of the Andes mountain range, from the Tumbes region to Tacna; in most of this geographical sector locusts always remain in a solitarious state.

As the Peruvian coast is an arid tropical desert, the life zone has very scarce vegetation, except for the areas in any of the 53 valleys running through it, where agriculture produces the highest yields in the country.

This ecosystem, which typically has scanty rainfall, is altered by the occurrence of the El Niño phenomenon, which tropicalizes the desert area of Tumbes, Piura and Lambayeque, leading to the appearance of abundant wild vegetation and favoring, above all, the development of the plant species *Exodeconus prostatus*, which leads to the appearance of high densities of orthoptera, among them the individuals of the *Schistocerca interrita species.* This situation generates numerous high-density foci of this plague throughout the Mórrope pampas in Lambayeque and south of the Sechura desert in Piura.

When the rains stop the desert occupies its space again and causes the vegetation to retreat, leading to the formation of “islands” of vegetation, further increasing the density of the orthoptera in general, and quickly triggering the gregarization phenomenon. The nymphs that appear after these rains constitute the first gregarigenous group, which will lead to the first generation of gregarious adult locusts. Unless timely controls are carried out, the locusts will quickly form the first swarms and the groups will try to migrate eastwards towards the Andes mountain range, spreading further towards the region of Cajamarca and even reaching the Amazonas region.

In its solitarious state, the plague remains in the coastal area, spreading occasionally towards the inter-Andean valleys; in its gregarious state, however, it can occupy territories as high as 3500 MASL, a scenario that hinders control actions.

In the higher areas in the western side of the Andes in Lambayeque and Cajamarca, this species will mature sexually, and when the next rainy period comes locusts will spread not only along the coastal area but also in the different inter-Andean valleys in the Cajamarca region even reaching the Amazonas region, its gregarigenous area sometimes overlapping with the gregarization area of the other locust species under official control (*Schistocerca piceifrons peruviana*).

The main events recorded for this plague have shown correlation with the El Niño phenomenon. The main gradations were recorded in 1578, 1982-1983, 1998-2002 and 2017.

The implementation of new evaluation and control techniques by SENASA in 2001 enabled the country to tackle and rapidly reduce one of the greatest events recorded for this plague in 2001-2002. Furthermore, in 2017 for the first time Peru was able to carry out the preventive control of this species by stopping the gregarization process in a 320,000 hectares area in the regions of Piura and Lambayeque.

In short, the population development is shown in the following table.

STAGE	Months											
	Jan	Feb	Mar	April	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
NYMPHS												
ADULTS												
MATING												
EGG-LAYING												

Source: SENASA

References:

Instituto Nacional de Recursos Naturales - INRENA. 1995. Mapa ecológico del Perú – Guía explicativa. Ministerio de Agricultura del Perú.

Rostworowski de Diez Canseco, María. El diluvio de 1578. *Revista semestral de la red de estudios sociales en prevención de desastres en América Latina*. *Desastres y Sociedad.* Agosto-Diciembre 1994 / No.3 / Año 2. Especial: Desbordes, Inundaciones Diluvios.

Author: Ing. Agr. Ricardo Solano

Courtesy translation by Global Locust Initiative