

Notas & Comunicações

On some insects and mites associated with dried and salted fish in Brazil (1)

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A sample of dried and salted "pirarucu" fish, *Arapaima gigas* Cuvier, from Manaus, Amazonas, Brazil, was noted to be highly infested by an insect; closer examination revealed the presence of two insect and two mite (acari) species, as follows:

Liposcelis bostrychophilus Badonnel
(Insecta, Psocidae)

This psocid was present in abundance on the dried fish, being easily seen moving rapidly over the sample and the wrapping material. The species was identified by Dr. T. R. New, Australia, who informed "that it is perhaps the most cosmopolitan of all stored-products psocids and is likely to have been transported through commercial activity."

Alaptus globosicornis Girault, 1908
(Insecta, Hymenoptera, Mymaridae)

This small hymenoptera was also present in appreciable numbers. Dr. L. de Santis, Argentina, provided the identification and informed that it is known from North America, Hawaii and Australia; it is also present in ambar from Mexico (end of Oligocene, beginning of Miocene). An egg parasite of Psocoptera developing in decaying organic matter of vegetal and animal origin, it is reported for the first time in Brazil.

Suidasia pontifica Oudemans, 1905
(Acari, Astigmata, Saprogllyphidae)

This mite species, also referred to in literature as *S. medanensis* Oudemans, 1924 and *S. insectorum* Fox, 1950, was present in large numbers. The mites were at first rather difficult to see due to their resemblance, in colour, to the dried fish and due to their very slow movement. The mites and their eggs were mostly concealed in crevices.

S. pontifica has been recorded from several parts of the world infesting many stored products (Flechtmann, 1968; Hughes, 1976; Fain & Philips, 1978). Cicilykutty *et al.* (1981a, b) observed no correlation between the level of salt retained in the flesh of several fishes in India and the number of mites infesting it, neither between their moisture content and number of adult *S. pontifica*.

Blattisocius keegani Fox, 1947
(Acari, Mesostigmata, Ascidae)

This is a widely distributed mite where adults, proto- and deutonymphs feed readily on the eggs of a number of stored products, insects and mites. It was also present in the dried and salted "pirarucu", probably as a predator of *Suidasia* eggs.

GENERAL REMARKS

The dried and salted fish sample, originating from Manaus, Amazonas, a region with very

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high ambient humidity, was brought to Piracicaba, São Paulo, where it was examined. Kept in the laboratory, in an ambient with a relative humidity level varying from 50 to 70%, the psocids disappeared after a period of 30 to 45 days and the *Suidasia pontifica* population was much reduced. This observation for the mite species is consistent with its Astigmatid nature, its water balance being essentially dependent on the relative humidity of the environment (or the atmosphere inside the package).

SUMMARY

Two insect and two mite species are reported from dried and salted fish ("pirarucu", *Arapaima gigas* Cuvier) in Manaus, Amazonas, Brazil, namely: *Liposcelis bostrychophilus* Badonnel (Insecta, Psocidae) and the parasite of its eggs, *Alaptus globosicornis* Girault (Insecta, Hymenoptera, Mymaridae); and, *Suidasia pontifica* Oudemans (Acari, Astigmata, Saprogllyphidae) and *Blattisocius keegani* Fox (Acari, Mesostigmata, Ascidae).

Key words: dried fish, stored-products insects and mites.

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Presença de alcalóides β -carbolínicos no Rami ou Hami (Bebida de índio)

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INTRODUÇÃO

O homem, mesmo em sociedades mais antigas, sempre fez uso de substâncias naturais com ações alucinogênicas. Um grupo considerável destas substâncias, entre elas a harmina e a harmalina apresenta em comum o núcleo indólico, derivado do triptofano. Sua atividade sobre o sistema nervoso é devida à interferência nas funções de determinadas substâncias endógenas, como por exemplo, a serotonina (Wcoley, 1962), que são básicas nas funções bioquímicas do cérebro.

MATERIAL E MÉTODOS

A amostra estudada (750ml) foi fornecida pelo indigenista da Fundação Nacional do Índio (FUNAI), Sebastião Amâncio da Costa, que a adquiriu na tribo dos índios Canamari, habitantes das cabeceiras dos rios Javari, Juruá e afluentes nos Estados do Amazonas e Acre.

Duas espécies vegetais, mantidas em segredo pelos índios, entram em sua composição, sendo que outras espécies são adicionadas somente com a intenção de confundir os curiosos. A bebida é difundida entre a maioria das

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