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Lectotypification of *Piper limai* (Piperaceae)[1]

Lectotipificação de *Piper limai* (Piperaceae)[1]

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Abstract

Piper L. is one of the most diverse genera of Angiosperms, with more than 6,000 published names. Following studies of Piperaceae in Northeastern Brazil, we identified a name that requires a designated type. We visited herbaria in Brazil and consulted important online collections, along with protologues and bibliographies where the name was cited. A lectotype is designated for *Piper limai* Yunck.

Keywords: Nomenclature, Northeastern Brazil, Taxonomy

Resumo

Piper L. é um dos gêneros mais diversos das Angiospermas, com mais de 6.000 nomes publicados. Considerando os estudos de Piperaceae no Nordeste Oriental do Brasil, nós identificamos um nome que deveria ter um tipo designado. Foram visitados herbários brasileiros e consultadas importantes coleções online, bem como protólogos e bibliografias onde o nome foi citado. Um lectótipo é designado para *Piper limai* Yunck.

Palavras-chave: Nomenclatura, Nordeste do Brasil, Taxonomia

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Piper L. is a pantropical genus with a high diversity in the neotropical region (Quijano-Abril et al., 2006). It is one of the most diverse genera of Angiosperms (Moonlight et al., 2024), accounting for more than 6,000 published names (IPNI, 2026).

Kunth (1839) was one of the first botanists to examine Piper and proposed distinct genera according to vegetative and reproductive characters. Later, these groups were recognized under a natural arrangement in Piper (Jaramillo et al., 2008). Several classifications and new taxa have been proposed over the years (e.g., Miquel, 1843; Candolle, 1869; Trelease & Yuncker, 1950; Callejas, 1986; Tebbs, 1989). Truman Yuncker was an important expert on Piperaceae from the New World and published more than 150 new taxa (e.g., Trelease & Yuncker, 1950; Yuncker, 1966, 1972, 1973, 1974). A few taxonomic surveys were conducted with Brazilian species (e.g., Trelease & Yunker, 1950; Callejas, 1986; Tebbs, 1989), especially by analyzing original material and designated types according to the rules of the International Code of Nomenclature for algae, fungi, and plants (ICN) (Turland et al., 2025).

Recently, we found a name *Piper* in Northeastern Brazil (Melo, 2021; Melo & Alves, 2021, 2024) with no appropriate type designated. Therefore, this work aimed to update a nomenclatural recommendation, as suggested by the ICN (Turland et al., 2025).

Typification

Piper limai Yuncker. Boletim do Instituto de Botânica 3: 49, 1966. Type: Brazil. Alagoas: Colônia Leopoldina, Engenho São Sebastião, 2 September 1957, A. Lima 3 (holotype: IPA [missing sample]; lectotype, NY barcode NY00251436 [digital image!], selected here). Fig. 1A-B.

Notes: *Piper limai* was described based on a single collection and cited by Yuncker (1966) as "A. Lima 3 (IPA, type)". The herbarium indicated on the protologue was visited, but no specimen was found. The curator of the Herbarium of the Instituto Agronômico de Pernambuco (IPA), Dr. Rita Pereira (pers. com.), confirmed that this sample is not recorded in the herbarium. We also consulted the following online databases: Global Plants (2026), REFLORA Virtual Herbarium (2026), speciesLink (CRIA, 2026), the New York Botanical Garden (NY, 2026), and the US National Museum of Natural History (2026). However, just a specimen was found.

One sheet of this collection was incorporated into the NY herbarium many years ago, and the label information corresponds to the protologue published by Yuncker (1966). Many of the original materials and specimens studied by Yuncker were incorporated into the NY herbarium collection by the agreement of the original herbaria (Meurer-Grimes 1989; Holmgren et al., 1996). Therefore, the sample analyzed by Yuncker (1966) may have been sent by the IPA herbarium, which at that time had Dárdano de Andrade Lima, collector of the specimen, as the Herbarium Keeper. Furthermore, the image published as holotype by Yuncker (1966) corresponds sharply to the sheet at the NY herbarium (Fig. 1 A-B). We believe that Yuncker received the sample from D. A. Lima, studied and photographed it, and published the new species. After Yuncker's death, the sample was incorporated into the NY herbarium collection as several other samples (Meurer-Grimes, 1989). Thus, we considered "A. Lima 3 (IPA)" as a missing sample and, following ICN Art. 9.3 and 9.11 (Turland et al., 2025), a lectotype must be designated, as we do here.

In addition, A. Lima 57-2785 is a collection deposited at the IPA herbarium and preserved as a type collection, with a holotype label. This voucher is a specimen of P. limai collected in the same locality as the original material. Nevertheless, the date "2-XI-1957" (November 2, 1957) and the collector number "57-2785" are inconsistent with the protologue and the image provided by Yuncker (1966). Thus, based on Turland et al. (2025), we confirmed here that the exsiccatae "A. Lima 57-2785 (IPA)" is not a nomenclatural type as indicated by the herbarium.

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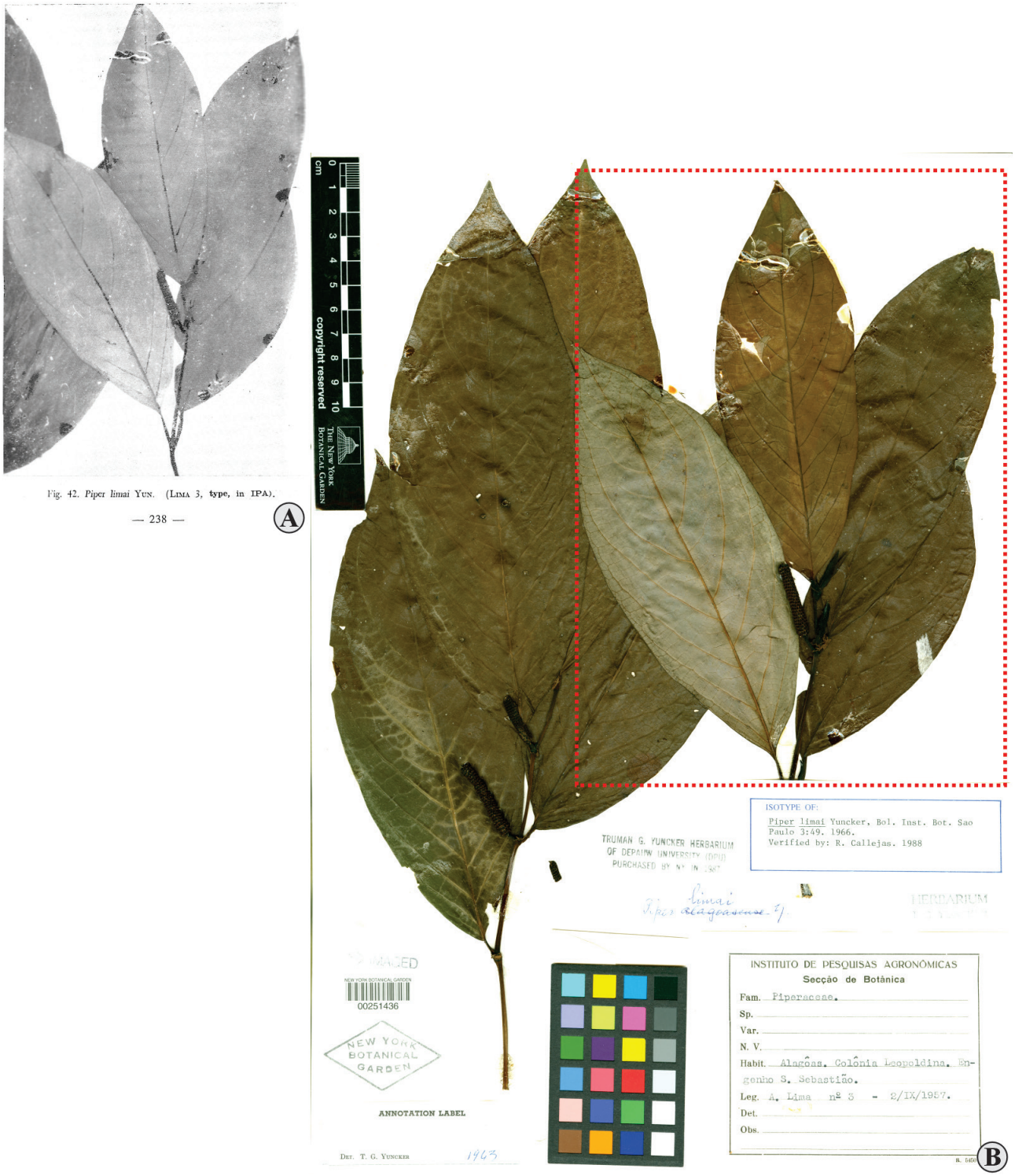

Figure 1. A. Image of type by Yuncker (1966). B. Lectotype of *Piper limai* Yuncker (NY barcode NY00251436), image from the Herbarium of the New York Botanical Garden (NY). The red dashed rectangle, without labels, shows the similarity of the specimen with the image of the holotype published by Yuncker (1966). B. Image reproduced with permission.

the Herbarium of the New York Botanical Garden (NY) for allowing us to use images of specimens. We are grateful to Jefferson R. Maciel, Maria Regina Barbosa, Rafaela A. P. Silva, and Sarah M. A. Souza for reviewing the first draft of this manuscript.

Conflicts of interest

The authors declare no conflicts of interest.

Author contribution

AM visited herbaria, consulted online databases, compiled the data, and wrote the manuscript; MA reviewed the manuscript.

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