“New-World” vs. “Old-World” Tarantulas: Just What Are the Differences?

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Many pet owners, keepers, and hobbyists who have been keeping tarantulas in the pet hobby for any length of time, or even those who may be familiar with doing so, or those who may have simply seen them referred to as such in pet stores or at reptile expos, have heard the terms “Old-World” and “New-World” being applied to them. As it turns out, the origins of the terms “New-World” and “Old-World” can be traced back as far as the late 15th century when Christopher Columbus, the world renowned European traveler and explorer, made a name for himself during that time. When he returned to Spain after having discovered the Americas, he was regarded as the discoverer of “The New World” both by historians and later subsequent published works. This area of the “New-World” consisted of North, Central, and South America.

Given how Europeans have long lived upon and explored the continents of Africa and Asia, these areas of the world were then also subsequently referred to as “The Old-World” as a way to distinguish itself from “The New-World”. By the early 17th century, The “Old-World” would then be expanded to include all of Europe and Australia as well, with Australia having been discovered at a later period in history.

But what do these terms “Old-World” and “New-World” really actually mean when it comes to tarantulas, aside from where they simply come from? What are some of the other notable differences which can be mentioned or observed when it comes to comparing and contrasting the “New-World” versus the “Old-World” species? While there are certainly, of course always exceptions to every rule of thumb, there are two most well known and commonly cited differences between “New World” and “Old World” tarantulas which will be examined in this article: The presence of, or lack thereof of certain anatomical features known as “urticating setae” or better known as “Urticating hairs”, and differences in temperament, behavior, disposition, and venom potency and toxicity between the New World and Old World tarantulas.

Presence or Absence of Urticating Hairs

The first major difference between most New World and most Old World tarantulas has to do with the presence (or absence) of a special defense mechanism which most New World tarantulas generally

have, but Old-Worlds do not, and this is the presence of “Urticating setae” or “Urticating Hairs”. What are these hairs, and what are they used for? These hairs, which contain tiny microscopic barbs, are located on the upper rear area of the abdomens (or opisthosomas) of New World species. Some of the common and well-known examples of New World species which have these hairs include species such as *Brachypelma smithi* (Mexican Redknees), *Grammostola rosea* (Chilean Rosehairs), *Acanthoscurria geniculata* (Giant Whitknees) and *Avicularia avicularia* (Pinktoe Tarantulas).

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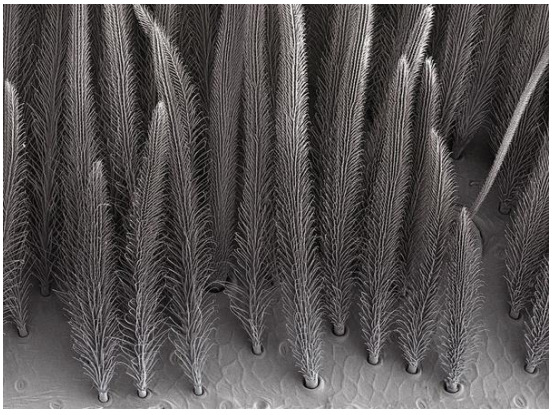
Tarantulas are not born with these hairs; however, they will begin to form with every consecutive molt as the tarantula grows. These urticating hairs are usually tiny, ranging in size from about 0.06 mm to 1.5 mm, and so they are usually barely visible to the naked eye. These hairs are utilized in one of two different ways. When threatened or agitated, a New World tarantula will turn to face away from its potential threat, and then, using a fast rubbing motion with their hind legs, will “kick” these urticating hairs off of their abdomens and into the air in the direction of the threat. These hairs, once they make contact, can cause itchiness and irritation to the potential would-be threat. Some species, however, generally do not kick these hairs into the air, but may use them if direct contact is made as a defense. Some New World species, such as *Megaphobema robustum* (Columbian Giants), can also have larger spines on their hind legs which can also be used in defense, but do not detach.



©Microscopic View of Uritcating Setae. Tarantula Heaven.

When it comes to Old-World tarantulas, most species lack these urticating hairs, opting instead to stand their ground with their more aggressive, or at least defensive behaviors of assuming a more active

defensive posture by spreading their legs outward, and raising their two fore-most legs while also exposing their fangs and chelicerae. If the threat or attacker persists, most Old World tarantulas will lunge forward in defense, either hitting the threat directly or the ground directly in front of the threat. Some common examples of Old World tarantulas which utilize this more active defensive behavior can include *Pternochilus murinus* (Mombasa Golden Starburst or OBTs), *Citharischius crawshayi* (King Baboons) and *Haplopelma lividum* (Cobalt Blues). New World species, however, may eventually resort to these more active defensive postures as well if sufficiently provoked for prolonged periods of time and/or if their urticating hairs defense, or if running away is not effective in deterring or escaping the threat.

Venom Potency, Toxicity, and Temperaments and Dispositions

A second major difference, at least in general (although there are some exceptions) between new World and Old World tarantulas are differences in the potency and toxicity of their venoms. Most tarantulas have mainly neurotoxic venoms, although serious side effects or complications are uncommon. Many tarantula bites are considered “dry bites”, or bites in which no venom is injected, and which are intended to serve primarily as a warning to the would-be threat. Statistically speaking, no documented or recorded deaths or fatalities from a tarantula bite are known (at least as far as we are aware), although as with any venomous animal bite or sting, secondary infections and/or anaphylactic shock, or otherwise known as a severe allergic reaction to the bite, may be possible. This allergic reaction or secondary infection *can* be fatal, so it is perhaps always best recommended to seek medical attention in the event of any tarantula or spider bite, even if there is no allergic reaction or infection.

When it comes to the bites of most New World tarantula species, the effects are generally similar to those of a bee or wasp sting, with there being some initial pain followed by other relatively minor effects such as redness and swelling, or soreness around the bite site. Generally, *most* New World species of tarantulas have relatively mild or weak venom when compared to Old World species.

Most Old-World tarantulas, however, due to their more aggressive or defensive nature, can generally be regarded as having more potent and potentially dangerous venom than their New World counterparts, and as such, bites from Old World species are often more common than New Worlds. Unfortunately, the nature and effects of Old World tarantula venom have yet to be well known or studied; however, a few serious bites or envenomations by Old World species to pet keepers and hobbyists have been reported, resulting in more serious and urgent medical attention or hospitalization being sought. Some symptoms of Old World tarantula bites can include symptoms such as localized pain and swelling, exhaustion and dizziness, moderate to severe muscle cramping, spasms, fever, and more heavy, or labored breathing. These symptoms can appear up to several days after a bite by an Old World species, which make their bites more serious and concerning. Some of the Old World genera regarded as having the most potent or medically significant venom to humans can include those Pterinochilus, Poecilotheria, Haplopelma, Heteroscodra and Selenocosmia.

Summary

For these reasons, it is often generalized that New World tarantula species are often relatively more

docile, reluctant to bite, and have relatively more mild venom than their Old World counterparts, which often lead to New World species being generally recommended as more suitable pet tarantula species for new or beginning hobbyists and enthusiasts, while Old World species are often generally regarded as being more aggressive, defensive, and potent in venom tarantulas better suited for more advanced or experienced enthusiasts. This is generally true, although as previously stated, there are always exceptions to each and every rule of thumb.

In any event, it is always still wise and recommended for any level keeper or enthusiast, new and beginning, or more advanced to always research and become familiar with the natural history, care, husbandry, and behavior of whichever tarantula species they end up selecting or becoming interested in, whether New World or Old World. And those individuals who may be known or suspected of being susceptible to secondary infections and/or severe allergic reactions to any venomous animal bite or sting should exercise special precautions to avoid being bitten or becoming envenomated by any tarantula species, New World or Old World.