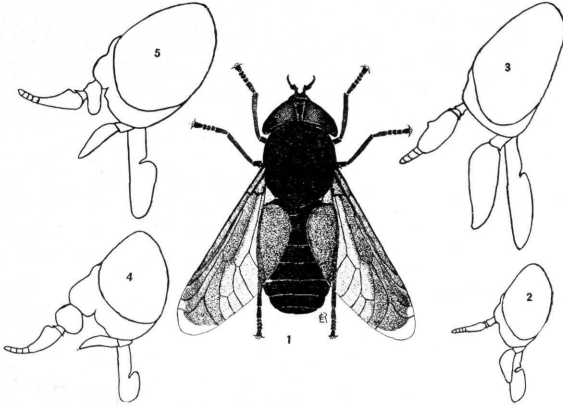


## A COMPARATIVE STUDY OF FOUR GENERA OF HORSEFLIES

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The dipterous family Tabanidae contains a number of genera which are not well known on account of the scarcity of material in the museums of the country. A group of four American genera which are nearly related in some respects and which have not been studied in a comparative way are known as *Lepidoselaga*, *Selasoma*, *Bolbodimyia* and *Snowiellus*. As I have the typical species of all of these genera I have selected about a dozen points upon which to make comparison and a brief statement of the results is offered for the purpose of extending acquaintance with these rather extraordinary members of our American fauna.



1, Female of *Snowiellus atratus*, enlarged two diameters; 2, side view of the head of *Lepidoselaga lepidota*; 3, same of *Selasoma tibiale*; 4, same of *Bolbodimyia bicolor*; 5, same of *Snowiellus atratus*.

The species of all these genera agree in having the wings largely black, the body wholly black, subcalius denuded, proboscis short and fleshy, third segment of the antenna composed of five annuli of which the basal is plainly longer than the others taken together, anterior tibia distinctly enlarged, hind tibia ciliate and the anal cell closed and petiolate. Although there are several characters common to all many differences exist and these are best pointed out by considering each genus separately.

*Lepidoselaga*. Type species *L. lepidota* from Central and South America. Length about seven millimeters, body shining black with sparse green-reflecting scale-like hairs. The genus was first called *Lepiselaga* by Macquart in 1838 and later emended by Loew, according to Osten Sacken. *Hadrus* of Perty,

1834, is a synonym but cannot be used here because of its selection as a name for a genus of Coleoptera a year earlier. Front rather wide, sides altogether parallel; frontal callosity small, narrower than the front and without an extension above; palpi flat shining black rather large and nearly spoon-shaped; face everywhere naked and shining black; under side of the head black and sparsely furnished with pale yellow hairs; antennae entirely yellow, slender throughout, third segment with a very slight basal prominence, so slight in fact that it may be said to be absent without being far wrong; legs clear black except the tarsi which are largely white; front tibia very much enlarged, middle tibia smaller but still distinctly enlarged, hind tibia ciliate and very slightly thicker than its femur; sides of the thorax black with light brown hair; wing largely black, this color extending on the costal side to the tip of the first vein and limited outwardly by a rather irregular curved line from thence to the posterior margin of the wing at the vein separated the third and fourth posterior cells, fourth and fifth posterior and anal and axillary cells largely nearly hyaline, black or the wing enclosing seven more or less rounded small hyaline spots.

*Selasoma*. Type species *S. tibiale* from South America. Length about 14 millimeters, body shining blue-black, form robust. The genus was erected by Macquart in 1838 to receive *Tabanus tibialis* Fabr. Front narrow, sides clearly parallel; frontal callosity small, not so wide as the front and with a distinct extension above reaching nearly to the vertex; palpi large, thickened, reaching nearly to the end of the proboscis; face black, thinly clothed with gray dust; under side of the head clothed with black hair; antennae not inserted on a prominence, black, first and second segments small, third segment compressed, rather wide and thin and the prominence which usually is near the base here is located near the middle of the length; legs entirely black and clothed with black hair, all the tibiae distinctly enlarged but with a gradual decrease in size from before backwards; sides of the thorax black with black hair; black color of the wing extending on the costal border to the tip of the auxiliary vein and limited outwardly by a line drawn nearly straight backward from this point through the middle of the discal cell to the apex of the apical cell; the cells on the posterior part of the wing are lighter in color and there is a distinct transverse hyaline spot across the fourth vein before the base of the discal cell.

*Bolbodimya*. Type and only species of the genus *B. bicolor* from South America. Length about 11 millimeters, body opaque black, form rather slender. The genus was erected by Bigot in 1892 and described from a single specimen. So far as I am aware only three specimens of the species have found their way

into collections. Front of normal width, sides very nearly parallel although just slightly narrowed above; frontal callosity large, as wide as the front and with an extension above; palpi small, not distinctly compressed, much shorter than the proboscis; face densely clothed with orange colored pollen; under side of the head colored like the face and clothed with hair of the same color; antennae situated on a very decided shining black bulb-like prominence, first segment very large, spherical, shining black and with some black hairs on the under side, second and third segments yellowish-brown, the latter with a distinct prominence very close to the base; sides of the thorax very densely clothed with orange colored hair; legs black, front tibia enlarged and curved, distinctly larger than its femur, middle tibia plainly larger than its femur, hind tibia and femur of nearly the same size; wing black except the tip of the second submarginal cell which is hyaline, the outer limit of the black extends almost straight backwards from the tip of the anterior branch of the third vein.

*Snowiellus*. Type species *S. atratus* from Arizona. Length about 14 millimeters, body black, nearly opaque, form robust. The genus was proposed by myself in 1904 and described after having studied two specimens, the only ones I have seen. Front wide, narrowed above; frontal callosity wide, as wide as the front and with a connected spot above; palpi rather long but somewhat slender, decidedly shorter than the proboscis; antennae situated on a shining black elevation, first segment black and clothed below with black hair, produced downward but not widened or produced upward so that from above these organs appear perfectly normal, second and third segments opaque brown, the latter with a distinct prominence very close to the base; face mostly shining black; underside of the head clothed with black hair; sides of the thorax black and clothed with black hair; legs black, anterior tibia slightly enlarged, middle tibia less enlarged, hind tibia only very slightly larger than its femur; wing black with the exception of a hyaline area which curves around the apex, occupying the apexes of the first and second submarginal cells so that the outer limit of the black is marked by a curved line from the apex of the second vein to the apex of the posterior branch of the third vein.