

NOTES

On the putative existence of a diploid number 42 cytotype of *Sylvilagus aquaticus* (Bachman, 1837) (Lagomorpha : Leporidae)

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North American lagomorphs of the family Leporidae show distinct, generic level patterns with respect to chromosomal variability. All *Lepus* studied to date have a diploid number (2n) of 48, whereas species of *Sylvilagus* are much more variable, spanning the range from 2n = 38 to 52 (Robinson 1980, 1981, Robinson *et al.* 1983, 1984, Ruedas *et al.* 1989, Schröder and van der Loo 1979, Stock 1976).

At the intraspecific level, however, *Sylvilagus* appears to support a relatively stable diploid complement. Given the stability in diploid number of *Sylvilagus*, it is all the more noteworthy when reports appear suggestive of the presence of one or more cytotypes in a given *Sylvilagus* species. Robinson *et al.* (1983) raised doubts as to the validity of the reported 2n = 52 karyotype for *S. transitionalis* (Holden and Eabry 1970), compared to their report of 2n = 46. This led to the elucidation of two distinct cytotypes in *S. transitionalis*, probably arising as a result of biogeographic events transpiring during the Wisconsin glaciation (Ruedas *et al.* 1989). As result of this work, the Southern Appalachian cytotype (a morphologically cryptic phenon) recently was recognized as a separate species (Chapman *et al.* 1992). Another doubt raised by Robinson *et al.* (1983) was with respect to the diploid number characteristic of *S. aquaticus*. Early and Mouton (1973) had reported 2n = 42 for *S. aquaticus* (collected just outside New

Orleans ; E.M. Early, pers. comm.), whereas Robinson *et al.* (1983) reported $2n = 38$ from Cameron Parish, southwestern Louisiana). The report of Early and Mouton (1973), however, was restricted to a conference abstract later published in the Mammalian Chromosomes Newsletter. In addition, the specimen upon which the work of Early and Mouton (1973) was based subsequently was lost, and it also is uncertain who identified the specimen as *S. aquaticus* (E.M. Early, pers. comm.).

Nonetheless, because events related to the Wisconsin glaciation appear to have played an important role in the chromosomal evolution of other species of *Sylvilagus* (Ruedas *et al.* 1989), and because of the potential of both the Mobile Bay/Alabama River complex and the Mississippi River as barriers, it seemed appropriate to examine the status of the two reported cytotypes of *S. aquaticus* more closely.

One specimens of *S. aquaticus* was obtained in Alabama (Alabama : Lee Co. ; Auburn [near Prather Lake] ; 1 male) ; also examined were five specimens from Texas (Texas : Brazos Co. ; 15 mi N, 8 mi E Brazos Co. Courthouse [Bryan], near Edge ; 3 females, 2 males). The specimens from Texas were karyotyped using the in-vivo bone marrow karyotype technique described by Patton (1967) as modified by Baker *et al.* (1982). G-bands were produced with the technique of Seabright (1971). The Alabama specimen was karyotyped from fibroblast cultures established from a sterile tissue biopsy (Ruedas *et al.* 1990). All specimens are deposited in the Texas Cooperative Wildlife Collections of Texas A & M University, College Station, Texas.

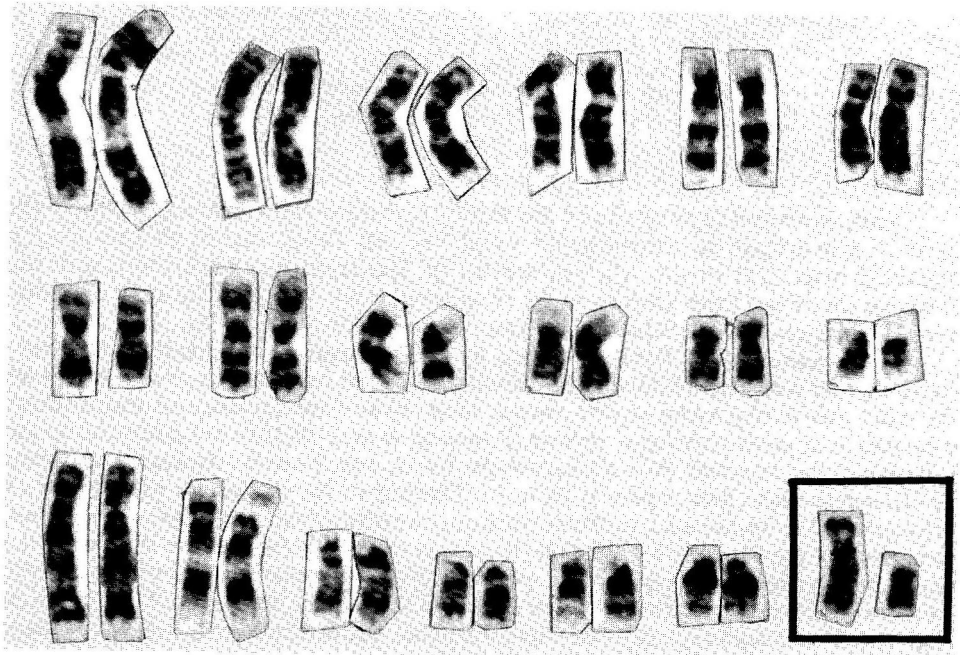


Fig. 1. — G-banded karyotype of a male *Sylvilagus aquaticus* from Lee County, Alabama. Top two rows composed of metacentric and submetacentric autosomes ; bottom row, subtelocentric and acrocentric autosomes ; inset, X and Y chromosomes.

The karyotype of the specimen from Alabama (Fig. 1) is the first reported for a male *S. aquaticus*; the Y chromosome is small and submetacentric, as in other species of *Sylvilagus* examined (Robinson *et al.* 1983, 1984). The autosomal complement consists of 12 pairs of metacentric and submetacentric chromosomes and 6 pairs of subtelo centric and acrocentric chromosomes, as described by Robinson *et al.* (1983).

All specimens examined for this work had a $2n = 38$, and were similar in diploid number and G-band pattern to that reported for *S. aquaticus* by Robinson *et al.* (1983). Only the karyotype reported by Early and Mouton (1973) is at variance with the $2n = 38$ reported here and elsewhere (Robinson *et al.* 1983).

Data as to the diploid number of *S. aquaticus* now are available from widely scattered points through its range (Robinson *et al.* 1983, this paper). *Sylvilagus floridanus* is sympatric with *S. aquaticus* in parts of southwestern Louisiana (Hall 1981), where the specimen karyotyped by Early and Mouton (1973) originated. There also can be little doubt that the diploid number of *S. floridanus* is 42 (Holden 1968, Holden and Eabry 1970, Palmer and Armstrong 1967, Robinson *et al.* 1963). The evidence therefore must be interpreted as suggestive that the report of Early and Mouton (1973) of a chromosomal complement of 42 for *S. aquaticus* was due to incorrect species identification in a morphologically complex and indistinct group, and actually may have represented the karyotype of *S. floridanus* from a locality where that species is sympatric with *S. aquaticus* (e.g., Schwartz and Schwartz 1981, but see Lowery 1974).

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New locality records of *Mesomys* (Rodentia : Echimyidae)

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The arboreal echimyid rodents are often rare in collections. They appear to be chiefly active in the forest canopy, where traps must be placed to capture them easily. They can also be collected by shooting them at night, but because their eyeshine is weak, specific effort must be focused on finding them.

In a recent series of expeditions, I have collected a number of spiny rats of the genus *Mesomys*. These new records expand the known range of the genus into three countries where they were apparently unrecorded previously. It is currently unclear