

## **Michael, Mice and Stasipatry: A Remembrance of an Old Friend**

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## Michael, mice and stasipatry: a remembrance of an old friend

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The first time I discussed stasipatry was in the now distant year of 1965, almost half a century ago. At that time, I was a promising young researcher starting to be interested in the cytogenetics of Chiroptera. I traveled to Svizzera to capture species of Vespertilionidae, which were rare in Italy. Passing through Lausanne it came to my mind it was my duty to pay a visit to Prof. Robert Matthey (1900-1982), a pioneer in applying systematic cytogenetic studies to vertebrate (and especially mammalian) taxonomy. He coined the term "cytotaxonomy" (Matthey 1932) that opened the way to present-day evolutionary cytogenetics.

I discovered him in his laboratory where he prepared chromosomes of his pigmy mice (*Leggada*) (Matthey 1964), pressing fragments of spleen between two slides with his "magic" thumb. Matthey was always faithful to the squash technique that he mastered almost to perfection, despite the fact that the air-drying method was already in use. He greeted me as a colleague and I was amazed to learn that he knew my first work on the cytogenetics of bats. Suddenly he addressed me: "*Es que vous pensez de la stasipatrie de monsieur White?*", i.e., "What do you think about the stasipatry of mister White?" I understood Matthey's interest in White's model: the Robertsonian polymorphism he was studying in *Leggada* could very well be explained in a stasipatric way. Later, I discussed stasipatry directly with Michael White; it was when I had caught those first house mice with a re-arranged karyotype due to Robertsonian fusions.

Not everyone knows that Michael White spoke fluent Italian. He learned this language attending primary schools in Italy. During the years of the Great War, Michael's father had been transferred to Florence and Siena in Tuscany. Michael's brother was born in Siena where the Whites lived in the old city, "*in Contrada dell'Oca*"<sup>1</sup>. White had preserved a pure Tuscanian accent that he voluntarily exhibited with us italians, almost to claim a Florentine citizenship. As a foreign member of the Accademia Nazionale dei Lincei, he came frequently to Rome to attend special academic sessions. On one of these occasions, he asked Professor Giuseppe Montalenti (1904-1990), to find "*quel ragazzo che ha trovato i tabacco mice in Italia*" - i.e., "that boy that has taken the tobacco mice in Italy". He had read my first paper, written in Italian, on Robertsonian polymorphism and from it had understood my interest in his model of chromosomal speciation. With him, I spoke Italian: my English has never been good. In Italy, my generation has been imprinted in French or German, while English was prohibited: it was the language of the "enemy".

I was quickly fascinated by Michael's great scientific personality, and even more by his great humanity and profound good manners.

On that day he expressly requested from me to have him informed of my progress in the study of my bizarre Robertsonian mice. I wrote him in Italian, he answered me in English!

I must say that for me, Michael was a precious teacher and — an excellent press agent. He specifically cited my work in support of his ideas, having included them in his "Modes of Speciation" (White 1978a). In one of his papers (White 1978b), he cited some of my data even though they were yet unpublished! In that paper he introduced, in relation to the success of the fixation of chromosomal novelty, the possibility of "group selection". Without this help from Michael, my crazy little Robertsonian mice would certainly not have reached the notoriety since attained.

At that time, I was a convinced supporter of the stasipatric model. In May 1981, in the context of the celebrations of the centenary of Charles Darwin's death, the Accademia Nazionale dei Lincei organized an international meeting on speciation (Barigozzi 1982). Among the many prestigious invited speakers were Michael White, Hampton Carson and Ernst Mayr. Among the less prestigious speakers, there was I with my stupid mice. The discussion, as foreseeable, saw the confrontation of Mayr's and Carson's ideas which opposed those of White. Everything transpired in an atmosphere of mutual respect between great scientists.

My ideas — my convictions — about the role of structural chromosomal re-arrangement in microevolutionary processes were put to a test: I was pressed to reflect on them. I can't deny that the "molecular drive" hypothesis proposed by Gabriel Dover (Dover 1982) on that occasion, quickly captured my thinking. I confess, it was almost a betrayal in the confrontation with the teacher and friend: I started to progressively take distance from the stasipatric model.

Many things did not adhere to a strict stasipatric model in the case of my Robertsonian mice. Limited vagility of the organisms, which was one of the model's important points, and from which it derived its name, was not applicable to the house mice. The anthropochorous behavior of mice nullifies the ancestral limited vagility of the species. By then, evidence already existed on the basis of metacentrics shared by distant populations (Greece, Tunisia, Italy) of relationships due to introgressions between populations that resulted from passive transport. Today, on the basis of data gathered from the comparison between mitochondrial haplotypes, the evidence is more convincing. The same re-arrangements that for Michael were the pivotal point of speciation could be considered one of the factors — only one among so many — that operated in the initial phase of reproductive isolation.

I met Michael White one more time in Rome in 1982; I had in my personal library the 1977 edition of *Animal Cytology and Evolution* (White 1977) that he had sent to me as a complimentary copy by

<sup>1</sup>The "Nobile Contrada dell'Oca" is one of the 17 historical subdivisions of the Tuscanian city of Siena.

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ANIMAL CYTOLOGY  
AND EVOLUTION

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To my very good friend Ernesto Capanna  
The "Mouse King" of the  
Mediterranean region  
Michael J. D. White

Fig. 1. Michal White's autograph on Ernesto Capanna's copy of Animal Cytology and Evolution.

the publisher. I asked him for an autograph. On the first page he wrote: «To my very good friend Ernesto Capanna the "Mouse King" of the Mediterranean region» (Fig. 1). He explained to me that he intended to refer to the fantastic King of Mice with whom the Nutcracker fought in the famous short story for children of Ernst T. Hoffmann. Michael White was also that, a man of vast culture!

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