



Fenghai Qiusuo
Xuzuyin Yangfeng Lunwenji

有丛琐之细蜂，亦策名于羽属，近浮游于园荟，远翱翔乎林谷。青松冠谷，赤萝绣岭，无花不缠，无陈不省。吮琼液于悬峰，吸赧津乎晨景。于是回鹜林篁，经营堂窟。繁布金房，叠构玉室。咀嚼华滋，酿以为蜜。散似甘露，凝如割肪。冰鲜玉润，髓滑兰香。穷味之美，极甜之长。百药须之以谐和，扁鹊得之而术良。

徐祖荫 / 编

蜂
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徐祖荫养蜂论文集



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蜂海求索

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·贵阳·

祝賀徐祖蔭先生養蜂論文集出版

卅年研究積碩果
一朝百花聚精華

亞洲蜂聯副主席
中國養蜂學會理事長

張復興

北京己丑年

卅年研究積碩果 一朝百花聚精華

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序

怀着崇敬的心情读完了《蜂海求索——徐祖荫养蜂论文集》的书稿,掩卷之余,很有些感慨,更想将这些感受记录下来,以表达对徐祖荫养蜂工作的景仰。

与徐先生相识,是在近30年前的1981年广西阳朔召开的第2次全国中蜂协作会上。当时徐先生加入养蜂行业不久,我国著名的养蜂专家、贵州省农业厅高级畜牧师刘继宗先生特地带他到我在大会的住处,将他介绍给我。徐先生初出道时给我的印象很深刻,他当时在大会上报告的是危害蜜蜂的一种害虫——大蜡螟,而在养蜂界普遍认为危害的是小蜡螟,这是一个有争论的问题。会议休息期间,我打开放在会址院坝中的一箱中蜂察看,他也凑过来观察。我问他:箱底的巢虫是大蜡螟还是小蜡螟?他只是莞尔一笑,未即作答。后来的事实证明,他的结论是对的。第2次见面是在1985年于湖北恩施举办的一次学术交流会上,刘老因故未能出席,特请他代致问候。会后我拿了两管彩色胶卷给他,希望回贵州后拍一些刘老工作、生活的照片,以作日后资料。他回去后,特地请了一个有摄影专长的朋友给刘老拍照后寄来(该论文集中有张他与刘老的合影,就是当时留下的珍贵记忆),那时他给我的印象是——这人做事实诚。我那时主编一份杂志——《湖北养蜂》,徐先生既是杂志的热心读者,又是杂志撰稿人。随后,在全国性各种学术活动中多次接触,与徐先生就熟悉了。

初见徐先生时,听口音以为是贵州当地人。交往长了,才知道他是浙江人氏,但他却把一辈子都交给了大山深处的贵州农村、农业和农民。从20世纪70年代末起,转而投身于更能帮助农民脱贫致富的养蜂业,成了贵州养蜂界的后起之秀和年轻的领军人物。转眼30多年过去,如今他已是我国养蜂行业学有所成的知名专家。

徐先生一生的学术风格求实、严谨、慎密、系统、完整。书稿中一页页翔实的资料,密密麻麻、力透纸背的实验数据,就是最好的证明。

书稿内容十分丰富、全面,涵盖了贵州养蜂业的方方面面,如贵州的蜂种资源调查,蜜粉源植物,蜂群的饲养管理,蜂种选育与杂交优势利用,蜜蜂病敌害防治,蜜蜂授粉,蜂产品加工,蜂业经济,养蜂历史,蜜蜂文化,贵州省蜂学界人物介绍,中、意蜂饲养管理的地方标准,养蜂技术推广体系建设,项目管理方法等,与养蜂业相关的各个领域均有

成果和心得,许多成果具有创新性、前瞻性,充分体现了徐先生博大精深的技术实践和不落他人巢臼的探索精神。

书稿的另一个亮点是实用性。徐先生所选择的课题多是从本省实情出发,紧紧围绕养蜂生产所需要解决的实际问题来展开的。因此,他的周围不乏许许多多相知、相识的农民朋友和养蜂工作者,他的研究得到了他们的认同,产生了共鸣。从书稿中不难看出,现在我们所提倡的蜂产业技术体系建设、标准化规模养蜂,早在十多年前,徐先生就已开始从事这方面的探索和实践(如模式化养蜂)了,并因此多次得到政府及有关部门的奖励。

这本论文集还是一本系统而又完整的“一省之养蜂专著”,一本类似于贵州几十年养蜂生产与科技发展的史籍。我们可以从中清楚地看到贵州近几十年养蜂业发展与科技进步的脉络,看出贵州以刘老、徐先生为代表的前后两代养蜂工作者努力奋斗的艰辛历程,以及他们对贵州蜂业发展和中国养蜂科技的进步所作的重大贡献。

徐先生为人内敛、谦让,有时也会快人快语。我曾有幸于2004年10月随徐先生赴法国罗泽尔省首府芒德市,出席法国养蜂者联合会(UNFA)第15届全国代表大会。在面對法国同行大场面责问的“中国的蜂蜜为什么卖价这么低”时,他以一句“中国的养蜂者同时生产蜂蜜、蜂王浆等多种产品,成本相应低一些;作为中国的农业技术工作者,我更不理解法国的农产品价格为什么这么高”的回复,使质问者无言以对,全场安静,以致大会主持者出面说“我们不能只希望中国购买法国的飞机、电脑和铁路设备,而不希望中国向法国出口蜂蜜”来化解。徐先生的“实话实说”赢得了法国同行的尊重。

书中有一篇附文谈到:1978年,养蜂前辈刘老曾找到他,请之协助开展蜜蜂虫害——蜡螟的研究。自那以后,徐先生步刘老足迹,30多年的脚步始终没有再离开这条既充满希望、又布满荆棘的“养蜂之路”,没有丝毫的犹豫与彷徨,志不旁骛,奋勇前行。徐先生既是一位拼搏者,又是一位事业的成功者。徐先生的这本书更让我们怀念蜂业界老前辈——刘继宗先生,他的慧眼和提携使贵州的养蜂业在徐先生的接替努力下得以延续和兴旺。更期盼能读到贵州更多类似的养蜂科技专著,以表明刘继宗先生、徐祖荫先生领行的养蜂事业生生不息。

颜志立*

2009年10月8日于武汉

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FOREWORD

By cherishing a respectful feeling to read the manuscript of “Apiculture exploration—Xu Zuyin’s collection of theses on apiculture”, all sorts of feelings well up my emotion when the manuscript has been read to end. Also I want to note down my feeling to express my respect and admiration on Mr. Xu’s apicultural work.

I remember that nearly 30 years ago I firstly met Mr. Xu in 1980 on the second national Apis cerana joint meeting held in Yangshuo, Guangxi Zhuang Autonomous Region. At that time, Mr. Xu just jointed the apicultural trade in a short time. Mr. Liu Jizong, the well-known apiarist in our country and the senior technician of Guizhou Provincial Agriculture Department, brought him to meet me in my residence and introduced him to me. A deep impression was left in my mind. On the meeting, Mr. Xu made a report about a sort of injurious insects—greater wax moth. But there was another point of view, which considered that lesser wax moth was the injurious insect. Thus, controversy over differing opinion existed. During the break of the meeting, I opened an Apis cerana hive in the yard to make an observation and he moved close to have a watch. I asked him “is the insect on the hive bottom a greater wax moth or a lesser wax moth?” He was only with a smile and made no answer. The later fact proves that his conclusion is right. The second time we met each other was at an academic exchange meeting held in Enshi Prefecture, Hubei Province in 1985. Mr. Liu did not attend the meeting, but he asked Mr. Xu extend greeting to me. As the meeting was over, I gave Mr. Xu two rolls of color film and in the hope of taking some photos about Mr. Liu’s work and livelihood used as reference materials. When he went back to Guizhou, he asked his friend who was good at photograph to shoot such photos and posted them to me. In this collection of theses there is a picture of Mr. Liu and Mr. Xu, which is a precious memory for me. What an honest person was his impression in my mind. At those days I edited a journal named “Hubei Apiculture”, Mr. Xu was not only a warmhearted reader but also a writer for the journal. In addition, along with the contact in various national academic activities, we were more familiar each other day after

day.

When meeting Mr. Xu at the first time, I thought he would be a native of Guizhou by hearing his voice. With the time passing, I know he is a native of Zhejiang Province. However, he has devoted himself to the rural area, agriculture and farmers in Guizhou mountains. At the end of 1970s, he further joined in apicultural cause so as to help farmers shake off poverty and attain prosperity, becoming an up-and-coming youngster and young leading figure. More than 30 years elapsed, Mr. Xu has become a famous expert in our apicultural field.

Mr. Xu's academic style is realistic, rigorous, prudential, systematic and integrated. The full and accurate materials and a lot of experimental data in the manuscript are just the best proofs.

The manuscript content is abundant and overall, covering all aspects of Guizhou apiculture, such as bee variety resources investigation, nectar plant, colony breeding and management, selective breeding and utilization of hybrid heterosis, prevention and control of bee diseases and injurious insects, honeybee pollination, bee product development, economy of apicultural industry, apicultural history, honeybee culture, introduction to apicultural leading figures of Guizhou Province, local standard for breeding and managing *Apis cerana* and *Apis mellifera*, systematic construction of apicultural technical popularization, management method of projects, etc. Moreover, there many creative achievements and experiences related to all apicultural fields, which fully reflect Mr. Xu's extensive and profound technical practice and indicate his pioneering spirit.

Another notable point of the manuscript is characterized by its feasibility. Because most of Mr. Xu's research projects were carried out from the provincial conditions, tightly centered on the practical issues of apicultural production, thus he has many farmer friends and apiarists who have the same ideal and cause. His study is acknowledged and got sympathetic response among them. It is not difficult to see from the manuscript that the industrialized system construction and the apiculture in standard scale encouraged by us were explored and practiced by Mr. Xu (for example, his modeling apiculture) early in nearly 20 years ago.

This collection of theses is also a systematic and integral monograph on apiculture in one province, and a historical record on apiculture production and technology development of Guizhou Province in some dozen years. From it we can clearly understand the sequence of Guizhou apiculture de-

velopment and technology progress over the years, and the hardships and outstanding contribution to the apicultural development and technological progress, all of which are completed by the two generations of apiarists with Mr. Liu and Mr. Xu as their representatives.

Ordinarily, Mr. Xu Zuyin is introversive, modest and courteous, but sometimes he has straightforward talk. In October 2004, I had a chance going with Mr. Xu to attend the 15th National Congress of UNFA in Mende, the capital of Rozelle, France. In the face of French apiarists, when they called in question: “Why the selling price of Chinese honey is so low”? Mr. Xu answered: “Chinese apiarists produce diversified honey, royal jelly and so forth, of course, the cost is relatively low. As a Chinese agricultural worker, I can’t understand really, why French agricultural products are so high”? To such an answer, they could hardly find any reply and the meeting was silent. The chairman said: “we can’t only expect China purchasing planes, computers and railway equipment from France, but we still expect China can export honey to France” so as to eliminate the embarrassing situation on the spot. By speaking the plain truth, Mr. Xu obtained the esteem from French apiarists.

According to the attached paper in the collection of theses, in 1978 Mr. Liu Jizong visited him and asked him to assist the research on wax moth. Hereafter, following in Mr. Liu’s footsteps, Mr. Xu has been going to do such work over 30 years uninterruptedly. It is a hopeful and difficult “apiarian road”, but he went along without any hesitation. Mr. Xu Zuyin is a success fighter in the cause. Mr. Xu’s collection of theses made us miss the veteran Mr. Liu Jizong. Due to his insight and support, the apicultural cause of Guizhou Province can be prosperous and continuous under Mr. Xu’s succession. I am looking forward to reading more similar monographs on apicultural technology, so as to show apicultural cause directed by Mr. Liu Jizong and Mr. Xu Zuyin will be continuous forever.

*Yan Zhili**

October 8, 2009·Wuhan

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前言

我从事农业科研凡 30 余年,从最基层的农业技术推广站辗转调至贵州省农业厅工作,一直未曾中断。当这本论文集即将付梓出版之时,许多难以忘怀的往事不禁一桩桩、一件件又萦回在我的脑际。40 多年前,我自学校分配到基层不久,就喜欢上了农业科研工作。那时正是“文革”时期,政治高于一切,一心埋头搞科研,为当时的政治环境所不容。什么“徐某人一天只知道埋头搞业务,不关心政治”啦;什么“个人奋斗,想成名成家,搞个人突出”啦等闲言碎语,始终不绝于耳,随时都有可能在政治风浪中被打成“白专”典型的危险。然而所幸的是,我遇见了一位正直、宽厚的领导。他凭着良知,力排众议,顶住了来自各方面舆论的压力,为我遮风挡雨,大胆地支持我的研究工作,使它不致中途夭折。党的十一届三中全会拨乱反正,打破了多年来笼罩在知识分子头上的桎梏。邓小平同志“科学技术是第一生产力”的论断,送来了科学的春天。在全国科学大会精神的鼓舞下,我得到了县领导及县科委的大力支持,科研经费、工作条件都有了较大的改善,我的科研工作也逐渐走进了顺境。

20 世纪 70 年代末,我又有缘结识了我的恩师——省农业厅养蜂专家刘继宗先生,当时他正在我工作的贵州省锦屏县指导养蜂工作。为了养蜂事业的发展,他不断搜罗、举荐人才,正是他把我推荐到了贵州省畜牧兽医研究所,专门从事养蜂科研工作。为此,他曾多次守候在厅宿舍的值班室里,等候厅长下班,当面对陈情。为了进一步发挥我的作用,又是刘老先生力荐将我调到省农业厅主持全省养蜂工作,1986 年 6 月,他已身患重病,住院在床,对此事仍念念不忘。在他生命垂危、气若游丝、命悬一线之际,听到厅长前来看望他,他激动得一把扯掉戴在脸上的氧气罩,当着我的面,向领导和组织上提出了他一生中最后的请求。此后,每当我工作中遇到不顺心或难办的事情,回想此情此景,我就多了一份责任、忍耐与坚持,不敢稍有懈怠,唯恐辜负他老人家对我的期望和信任。

该论文集的出版,使我又重新看到了许许多多熟悉的姓名,想起了那些曾经先后与我朝夕与共、一起并肩工作过的同事们。我们曾经一起栉风沐雨,活跃在田间、地头;一起爬山涉水,走乡串寨,访问蜂农。他们曾经给我工作上许多支持与帮助,在生活上给了

我无微不至的关心与照顾。尤其令人怀念的是我那段在基层工作的日子。那时吃罢晚饭,几个志同道合的同事就互相串串门子,夏夜摇着扇子,冬天围着火盆,交谈白天的发现与收获,聊聊下步的工作和打算,一天的辛劳和疲惫都在唠嗑中烟消云散。那种从工作中得到满足的惬意、同事间亲密无私的合作,是现在许多人难以体会得到的。

该论文集得以出版,我还要感谢家人、亲友在背后的支持。没有她们操持家务,教养孩子,恐怕我也难以全身心地投入自己的工作和事业。这里尤其要提一下我的母亲。她先后多次从上海来到我曾经工作过的地方(如锦屏县、贵阳市),帮我带孩子。20世纪80年代后期,我因工作需要,要到轻工部食品发酵研究所*洽购菌种。我母亲那时恰好住在北京,她得知此事后,就主动和我舅妈去联系此事,那时她已是70岁的老人。因轻工部食品发酵研究所菌种存放地点在京郊,她们第二天又赶到京郊(牛王庙)去购买菌种给我寄来,为我节约了时间和宝贵的实验经费。这样的例子,实在是数不胜数。

这本集子的出版,当然还要感谢《蜜蜂杂志》、《中国养蜂》、《养蜂科技》、《湖北养蜂》、《贵州畜牧兽医》、《贵州农业科学》等多本杂志以及贵州科技出版社。这么多年来,我一直得到它们的大力支持。记得当我将《蜂场的经营管理》4万余字的手稿寄给《蜜蜂杂志》时,令我意想不到的,编辑部竟破例答应以长篇连载的方式发表,并因此得到了许多热心读者的回应。是编辑们背后默默的奉献与耕耘,才使我在治学的道路上,一直走到了今天。

本论文集收录了我所参与撰写的大部分论文,共108篇。发表时间的跨度长达31年,这次收集、整理出版,也历时3个年头,其中除少数几篇是农牧业方面的论文外,绝大多数都是养蜂方面的论文,故这本论文集起名为“蜂海求索——徐祖荫养蜂论文集”。这本集子虽以我个人的名义出版,但它绝不仅仅是我一生科研工作的总结与回顾,更重要的是,它也是贵州省整整一代科学工作者在发展农业、养蜂业中探索、奋斗的记录与见证。

随着现代社会经济的发展、科学技术的进步,科研工作者的工作条件、拥有的技术手段已是今非昔比,不但新人辈出,高水平的科研成果也是层出不穷。因此,将过去的工作集结成册,就权当作后继者前进大道上一颗小小的铺路石吧!

徐祖荫

2010年2月28日于林城贵阳

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PREFACE

I have uninterruptedly engaged in agricultural research for over 30 years, from the most basic agricultural extension station to the provincial agricultural department. When this collection of theses is about to be published, many unforgettable events of the past can not help lingering in my mind. Before 40 years, not long after I was graduated from school and assigned to basic unit, I loved agricultural research. In those days of the “Great Cultural Revolution”, politics was above all else. Under those circumstances, I could not afford to devote myself entirely to research work. Groundless accusations, such as “Xu does not concern himself with politics and only dedicate himself to his work” or “He want to establish his reputation as an authority through personal struggle”, were offensive to the ear. In the political wind and wave, I had the risk to be labeled as “expert but apolitical” type. Fortunately, I had a fair-mind and generous leader who withstood public pressures from all sides and supported my scientific work in all his conscience. The Third Plenary Session of the Eleventh Central Committee of the Party set things to right and smashed the mental fetters of intellectuals. Deng Xiaoping’s theory ——“science and technology are primary productive forces”, brought a scientific spring. Inspired by the spirit of the National Conference on Science and supported by the county’s government, science and technology commission and association, my research funding and working conditions have made greater improvements and my work has gradually embarked on good times.

At the end of 1970s, I met my mentor ——Mr. Liu Jizong, the apiculture expert of the Provincial Agriculture Department, when he was guiding the apiculture in Jinping County where I worked. For apiculture development Mr. Liu was constantly collecting and recommending qualified personnel. He recommended me to work in Guizhou Institute of Animal and Veterinary Science, especially engaged in apiculture research. Many times he was in the duty room of the department, waiting for the department director and making earnest plea. In order to further play my role, he also recommended me to be transferred to the Provincial Agriculture Department,

in charge of apiculture of the province. In June 1986, he had been suffering from serious illness and hospitalized in bed, but constantly bore in mind this matter. At his last gasp, when he heard the department director came to visit him, he was so excited that he tore off the oxygen mask on the face and presented to the leadership and organization of the last request in his life before me. Now as long as I face unsatisfactory or difficult issues, I will recall the above scene, thus I have more responsibilities, patience and persistence, afraid of failing to live up to the expectations and trust of this venerable old person.

The publication of this collection of theses makes many known names appeared once more before my eyes. And I recall my colleagues who made concerted efforts with me in those days. We worked together in field braving wind and rain; we traveled across mountains and rivers amid difficulties; we went from village to village to visit beekeeping farmers. They gave my work a lot of support and assistance and gave my daily life great care and concern. Especially the days when I worked in basic unit are the most unforgettable of my life. After supper, some colleagues with same ideals and same cause dropped in each other, shaking fans in summer night and seating around brazier in winter night. We talked about the discovery and harvest in the day as well as the working intention in next step, thus all of fatigues were vanished in chat. Such satisfaction came from work and from close cooperation between colleagues is difficult to be understood by many modern persons today.

At the time of publication of this collection of theses, I would like to thank my family, friends and relatives for their support. Without their housework management and children bringing-up, I am afraid I can hardly devote myself into the work and career. Here in particular, I would like to mention my mother. She had several times from Shanghai to my work places (such as Jinping, Guiyang) to help us with children. In the last 1980s, I intended to go to the Research Institute of Food and Fermentation Industry (RIFFI) of Light Industry Ministry*, to purchase microbial strain, when my mother happened to live in Beijing. After hearing the matter, she initiatively contacted RIFFI along with my aunt, in spite of being 70-year-old. For the strain was stored in the suburb of Beijing, they went to the suburb (Niuwangmiao) to buy the strain and send me, which saved my time and valuable experiment funds. Such examples are too

much.

Of course, I would also like to thank, “Bee Journal”, “Chinese Apiculture”, “Apiculture Technology”, “Hubei Apiculture”, “Guizhou Animal Husbandry and Veterinary Science and Technology”, “Guizhou Agricultural Science” and many other magazines, as well as Guizhou Science and Technology Press. Over the years, I have been to get their great support. For example, when I sent my forty thousand-word manuscript “Apiary management” to “Bee Journal”, it was unexpected that the editorial department made an exception to publish it in serialization manner, bringing about many responses from enthusiastic reader. It is the dedication and hard work of unknown editors that gives me the scholarship on the road has been reached today.

This collection of theses contains most of my papers, a total of 108, with a time span of 31 years, and its gathering, preparation and publication lasted 3 years. Apart from a few papers on agriculture and animal husbandry, most of them are about apiculture, so it is named “Apiculture exploration --- Xu Zuyin’s collection of theses on apiculture”. Although the collection of theses is published in my own name, it is not only my personal research summary and review. It is the most important that the collection of theses is the record and witness of exploration and struggle of the entire generation of scientific workers in our province for the development of agriculture and apiculture.

With the development of modern society and economy as well as with the improvement of science and technology, working conditions and technical means available at present are vastly different from those in the past. A large number of talented people are coming to the fore and high-level scientific achievements are emerging in quick succession. Therefore, the past work is collected in book form, as a small paving stone on the right road for the successors to move forward.

Xu Zuyin

February 28, 2010·Guiyang, the forest city

*In January 1995, its name was changed to China National Research Institute of Food and Fermentation Industry. In 2003, its name was changed again to China National Research Institute (Academy) of Food and Fermentation Industry(CNRIFFI) and jointed in China Light Industry Group.

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