



河南

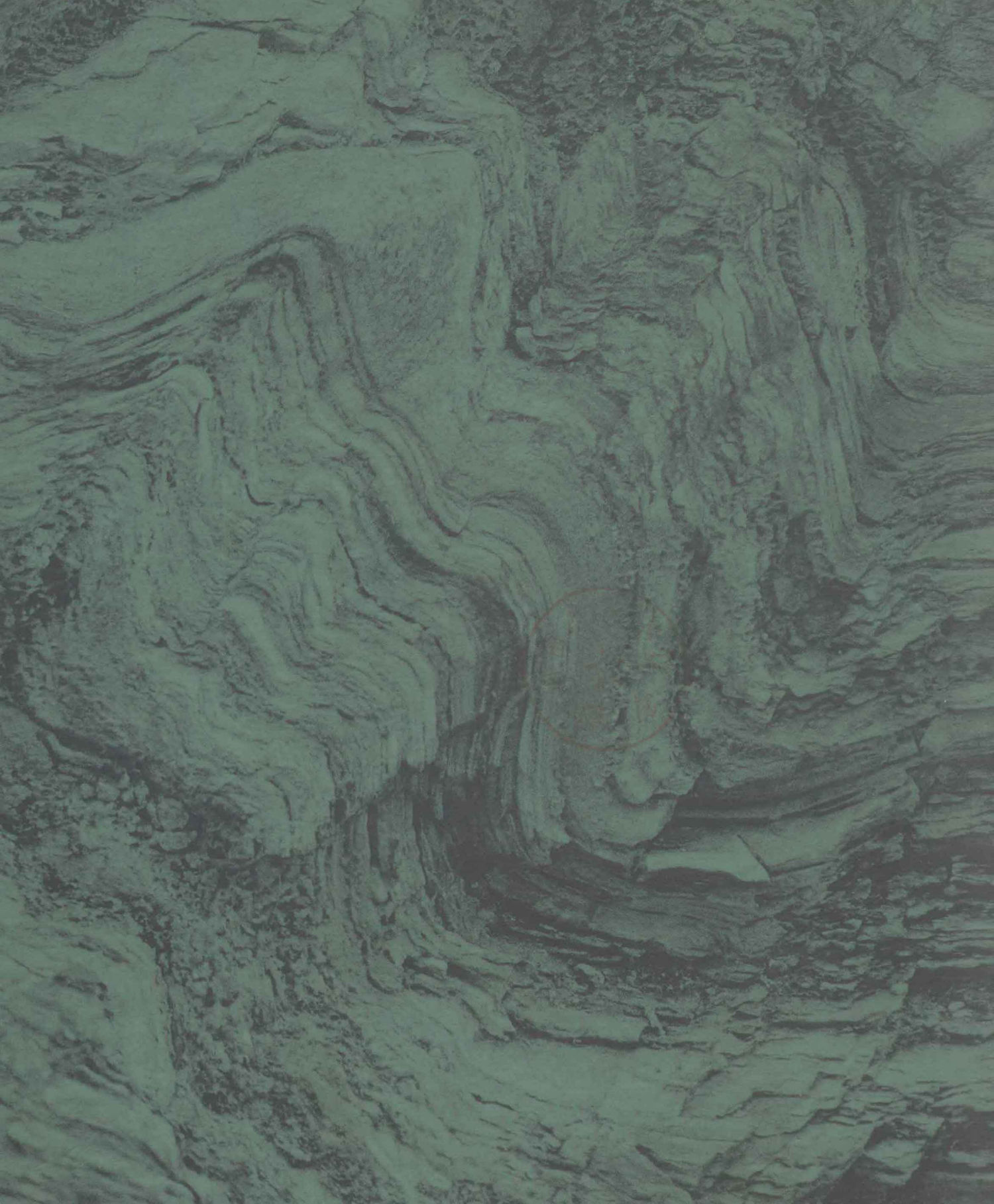
王屋山

國家地質公園

National Geopark

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王屋山国家地质公园 WANGWUSHAN NATIONAL GEOPARK

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序 PREFACE

济源市位于河南省西北部，是河南省十八个省辖市之一。举世闻名的小浪底水利枢纽工程就在济源市境内。改革开放以来，济源市经济和社会各项事业取得长足发展，先后获得“中国优秀旅游城市”、“全国卫生城市”、“全国科技先进市”、“全国文化先进市”等荣誉称号，是一座新兴的工业旅游城市。

王屋山位于济源市西北隅，因形似王者之屋而得名，乃“愚公移山”精神发祥地。其西接中条山，东连太行山，宛若巨龙横亘于华北平原与黄土高原之间。

王屋山系我国古代九大名山之一，为道教十大洞天之首，号称“天下第一洞天”，主峰天坛山，海拔1715米，相传轩辕黄帝曾于此设坛祭天，因之得名。是山也，峰峦叠翠，它现林立，泉瀑争流，树古石奇，乃融文化、自然为一体，品位极高的山岳型风景区。

不仅如此，王屋山尤可称奇者乃其地质资源。亘古及今，其独处三期具全球性规模的构造叠加部位，由此形成一系列具有特殊科学意义、能够代表整个华北地区的地质演变史，集科普性、典型性、稀有性、观赏性和完整性于一身的地质遗迹，俨然一部凝固于岩石的地质史书，记录着王屋山的古老和不朽，展示着王屋山独具魅力的观赏价值和科普价值。

我们坚信，王屋山的明天必将更加灿烂辉煌。是为序。

Located at the northwest of Henan Province, Jiyuan City is one of the 18 cities directly under the jurisdiction of the province, and the world famous Xiaolangdi Water Hub Project is just in Jiyuan. Since the reform and opening, Jiyuan has greatly developed in both economy and various social undertakings and it has in succession won glorious titles such as "China's excellent tourism city", "National sanitary city", "National advanced city in science & technology", and "National advanced city in culture construction". And it is a newly developing industrial and tourism city.

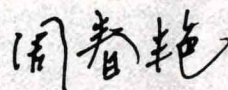
Mt. Wangwushan stands in the northwest of the city, getting its name because of its likeness of the house of king (Wang) and it is the birthplace of the spirit of "The Foolish Old Man who removed the mountains". It is close to the Zhongtiao Mountain to the west, and Mt. Taihang to the east like a huge dragon lying between the North China Plain and the Loess Plateau.

Mt. Wangwushan is one of the nine famous mountains in China, the first of the ten famous caves of Taoist, called "The first cave in the world". Its main peak is Tiantan Mountain with the elevation 1715m above sea level. It is said Emperor Xuan Yuan had ever built platform and offered sacrifice to the God here, so it is called Tiantan (God's platform). This mountain is full of ridges and peaks, forests, springs, waterfalls, rare trees and strange rocks, integrating culture and nature. It is a top grade mountain-type scenic spot.

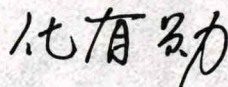
In addition, what is wonder are the geological resources of Wangwushan. It has been in the place of the three overlapped global-wide orogenies and formed a series of the geological evolutionary history with particular scientific significance, presenting all the North China area; and the geological relics of science popularity, typicality, rarity, enjoyment and integrity are rather like a solid historical record written in rocks, recording the agedness and perpetuity of Wangwushan, showing its unique charming enjoyableness and scientific value.

We are sure that the prospect of Wangwushan will be more brilliant. This is taken as preface.

中共济源市委书记
Zhou Chunyan, Secretary of CPC Jiyuan Committee



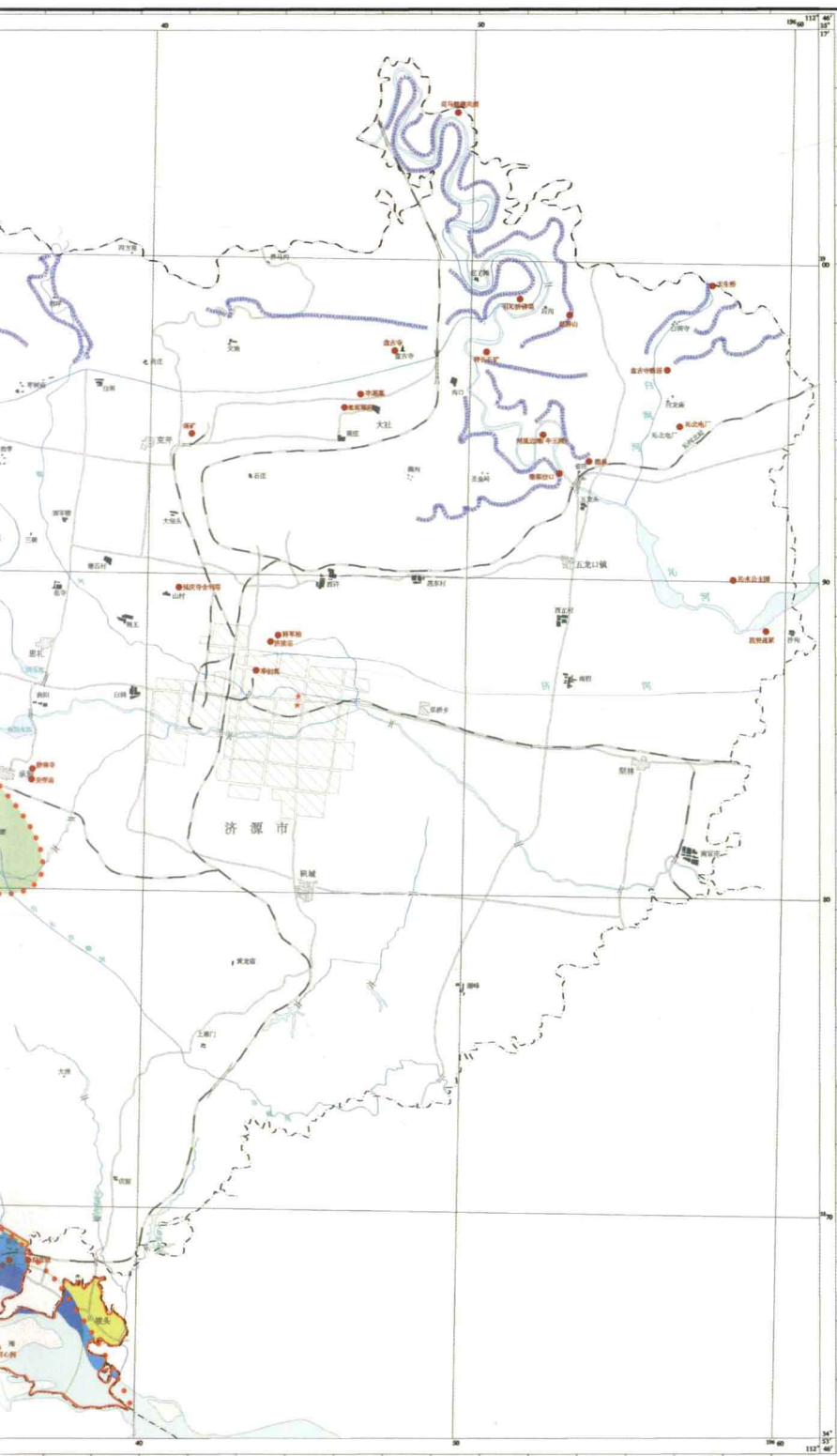
济源市人民政府市长
Hua Youxun, Mayor of Jiyuan People's Government



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区(群)分布图



王屋山国家地质公园 景区景点分布图

SCENIC SPOTS DISTRIBUTION OF WANGWUSHAN NATIONAL GEOPARK

简介 BRIEF INTRODUCTION

王屋山国家地质公园,位于豫西北济源市境内,是一座以裂谷构造、地质工程景观为主,以典型地质剖面、古生物化石、地质地貌景观为辅,以生态和人文相互辉映为特色的综合型地质公园。地理坐标为:东经 $112^{\circ}01'10''$ — $112^{\circ}31'50''$,北纬 $34^{\circ}57'00''$ — $35^{\circ}16'45''$,分为天坛山、黑龙峡、西滩和黄河三峡四个景区。面积约867平方公里。

Located in Jiyuan City, northwest of Henan, Wangwushan National Geopark is a comprehensive geopark mainly composed of rift valley structures and geologic engineering landscapes and also of geologic landforms and watery landscapes as well as typical geologic section, paleontology fossil and geologic landform landscapes, characterized by inter-reflecting ecologic and humanistic landscapes. The geographic coordinates are: $34^{\circ}57'00''$ — $35^{\circ}16'45''$ N and $112^{\circ}01'10''$ — $112^{\circ}31'50''$ E, divided into 4 scenic spots such as Tiantan Mountain, Heilong Gorge, Xitan and Yellow River Three Gorges with an area of about 867 square kilometers.

中国·河南省·济源市位置图
中国における河南省济源市の位置图
Sketch Map of Jiyuan City in Henan Province, China

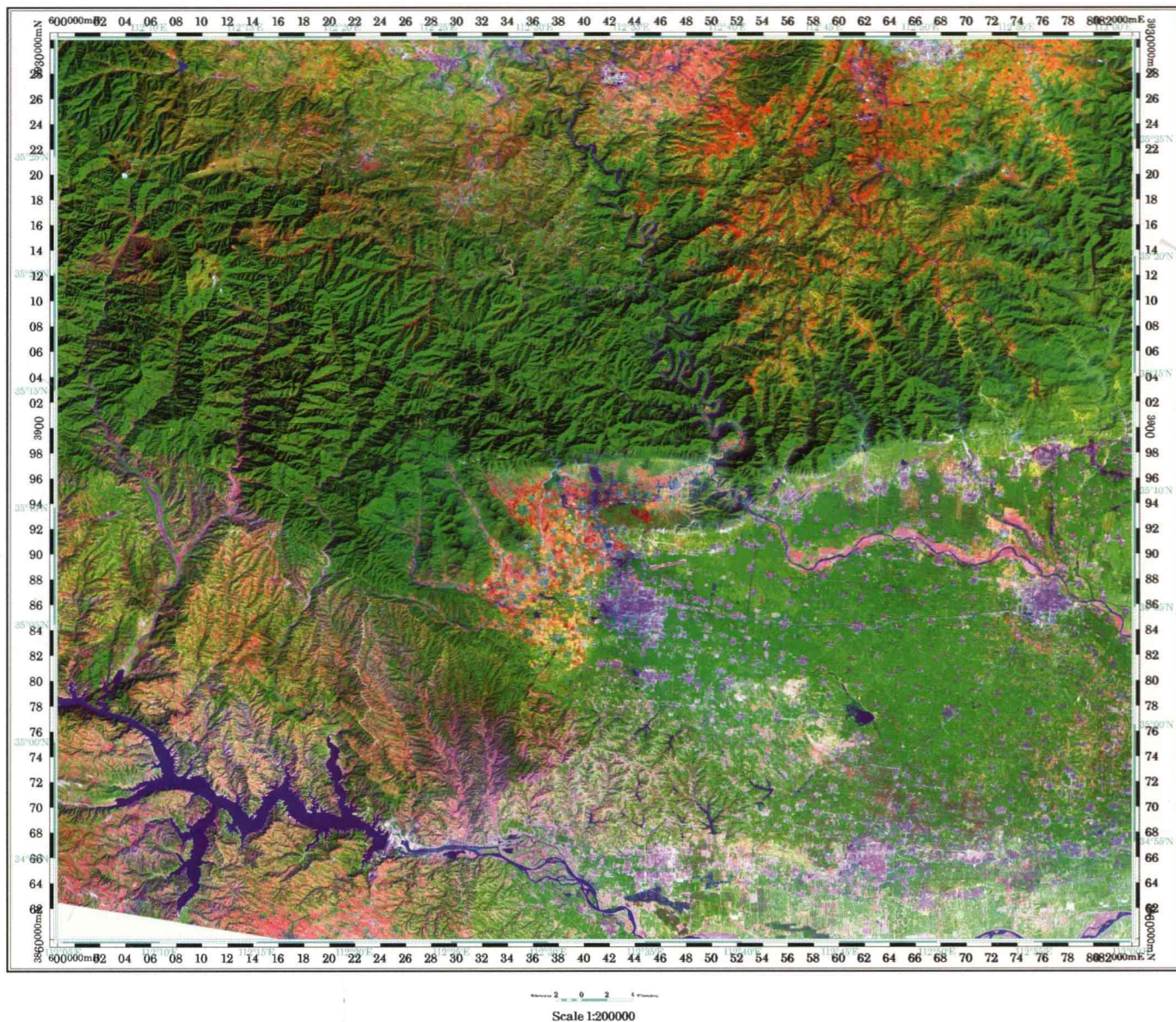


BRIEF INTRODUCTION

概况

河南省济源市王屋山国家地质公园卫星遥感影像图

Satellite remote sensing image map of Wangwushan National Geopark, Jiyuan City, Henan Province



王屋山的总体地貌分为中山、低山、丘陵、盆地和平原五部分，中山区起伏多变的远峰近峦，险峻恢宏的悬崖峭壁、深邃幽静的沟谷溪潭，各种动态的飞瀑走泉，在低山、丘陵的衬托下，有时如红日出海，有时像琵琶遮面，雄伟中又不失几分朦胧与神秘；而它与开阔、规则、整齐、坦荡的平川田园风光则形成了鲜明的对比，总体特征表现为统一中有变化，变化中有统一，节奏感强，颇赋诗的旋律，画的韵味，它的航测鸟瞰效果为明暗对比强烈，阴阳交替复杂；肌理清晰，立体轮廓明显；旷中有奥，奥中有旷，旷奥兼具，其美学价值是很高的。

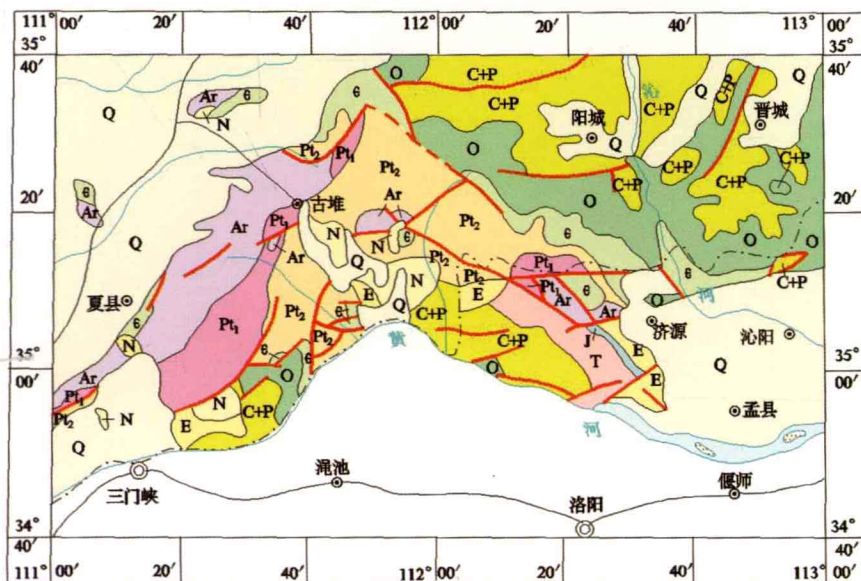
The overall land feature of Wangwushan is divided into five parts such as medium mountain, low mountain, hill, basin and plain. In the medium area the rolling peaks, perilous cliffs, deep valleys and various rough waterfalls and springs, against the low mountains and hills, are sometimes like red sun out of the sea and sometimes like shy girls, showing some nebulosity and mysteries; and it forms a remarkable contract against the open, regular, order and plain field scene with the gross property of variance in unification and vice versa, strong rhythm, and poetic cadence as well as pictorial taste. The aviation surveyed bird's-eyes effect is of strong contrast in brightness effect, intercrossed and complicated. It has distinct texture, mystery and unconstraint, outstanding stereo profile, boasting very high aesthetic value.

王屋山国家地质公园是由一系列具有特殊科学意义、稀有性和美学价值的，能够代表本区乃至整个华北地区的地质历史、特定阶段的地质事件和地质作用的典型地质遗迹所组成。主要表现在：①王屋山分布的太古宇林山群、古元古界银鱼沟群、长城系西阳河群、蓟县系汝阳群地层和嵩阳运动、中条运动、王屋山运动、晋宁运动系统地反映了古大陆增生、拼接和裂解的全过程，是这一时期极为重要的超大陆地质事件，具有世界对比意义。②王屋山出露齐全的太古宇、元古宇、古生界、中生界和新生界地层层序和保存完好的自嵩阳运动以来的八次造陆、造山运动遗迹，详细地记录了自25亿年以来，华北地区地壳的海陆变迁过程，俨然一部记录于石头上的、天然的“地质史书”。③复杂的地质地理背景，系统的地层层序、岩石组合、结构构造和古生物化石以及丰富的矿产资源、生态资源和人文资源，使王屋山成为储存地质信息的“数据库”。④在古大陆碰撞拼接的背景下，导致王屋山在中条期褶皱构造十分发育。⑤在王屋山的天坛山，由不整合面形成的大绝壁虽经改造，残迹犹存；尤其是两期不整合面的“T”形交汇，更是国内少有、世界罕见。⑥在下元古界银鱼沟群的大理岩中，发育了一种与硅化木形状相似的典型构造遗迹，我们称之为“席筒状构造”，这种构造截止目前在地质文献中尚未记载。

Wangwushan National Geopark is composed of a series typical geologic relics with particularly scientific significance, rarity and aesthetic value, able to represent the area and even all North China's geologic history, geologic events and geologic functions in particular periods, which mainly shows: 1. The Archean Forestry Mountain Group, Paleoproterozoic Whitebait Valley Group, Changcheng System's Xiyang River Group, Jixian System's Ruyang Group Stratum, and the orogenies of Songyang, Zhongtiao, Wangwushan and Jinning distributed in Wangwushan reflect systematically the whole process of accretion, matching and cracking of the ancient continents, which are extremely important supercontinent events with worldwide contrasting significance. 2. The complete outcrop of Archean, Proterozoic, Palaeozoic, Mesozoic and Cenozoic stratigraphic successions and perfectly conserved relics of the eight large-scale epeirogenesis and orogenies in Wangwushan since the Songyang Orogeny have recorded the crust's changes of sea level in detail in North China in the past 2.5 billion years, just like a "natural geologic history book" recorded in rocks. 3. The complicated geologic and geographic backgrounds, the systematic stratigraphic successions, rock assemblage, structures, paleontology fossils, and the abundant mineral resources, ecological resources, and humanistic resources make Wangwushan become a "database" of conserved geologic information. 4. Against the background of collision and matching of the ancient continents, the folded structures in Wangwushan in the Zhongtiao stage were greatly developed. 5. In the Tiantan Mountain of Wangwushan, the residual relics are still reserved due to the plane of unconformity of the large beetling walls; especially the "T"-shape cross of the planes of unconformity of the two stages are rare both at home and abroad. 6. In the marble of Neoproterozoic Whitebait Valley Group, a typical structure relic like silicified wood was developed, which we call "mat-roll structure" and there has been no record of this kind of structure in geologic literatures so far.

王屋山国家地质公园区域地质图

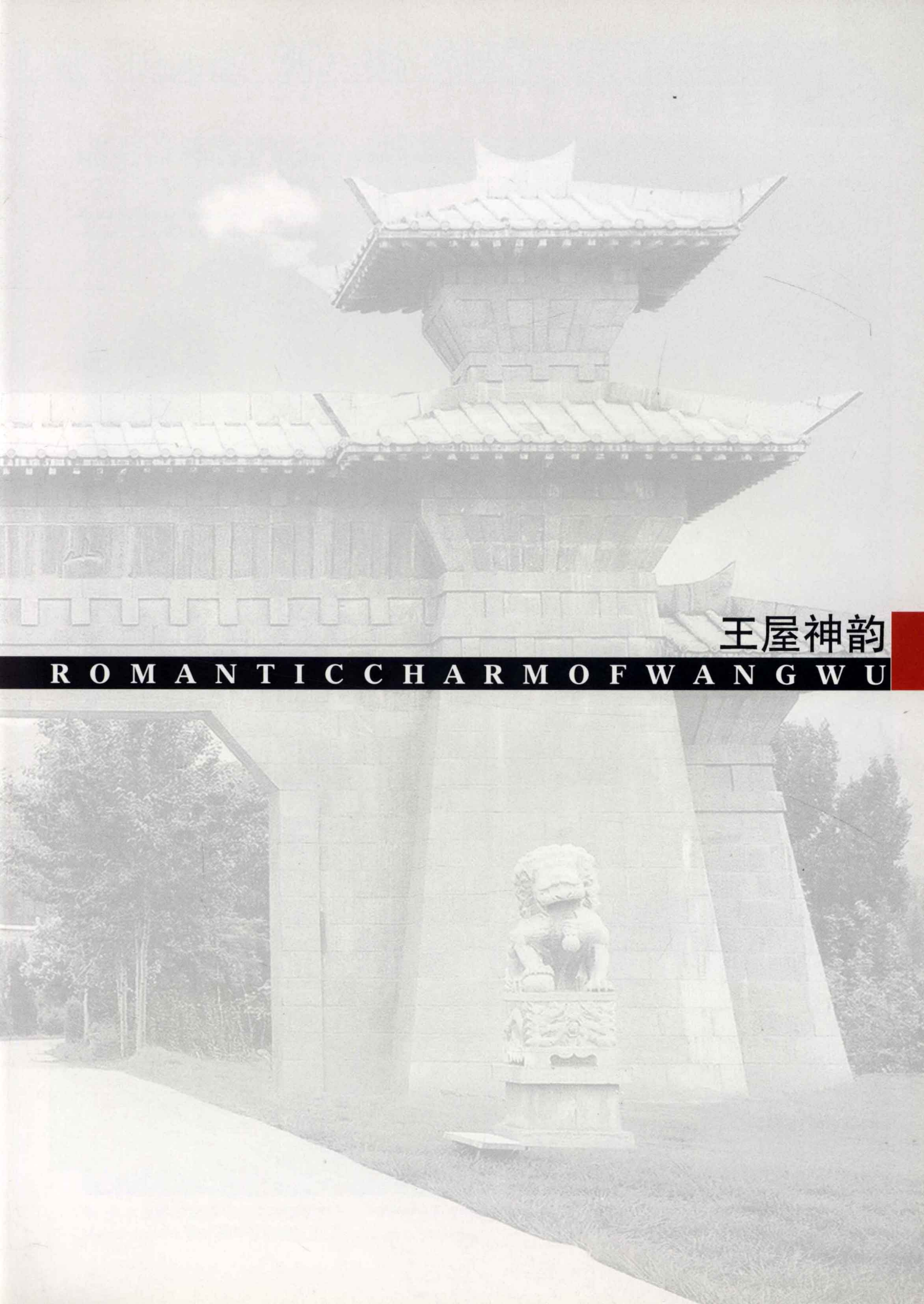
Regional geological map of Wangwushan National Geopark



图例 CUTLINE

Q 第四系 Quaternary	6 寒武系 Cambrian
N 新近系 Neogene System	Pt ₂ 中元古界 Mesoproterozoic
E 古近系 Paleogene System	Pt ₁ 古元古界 Paleoproterozoic
J 侏罗系 Jurassic	Ar 太古界 Archean
T 三叠系 Triassic system	断层 Fault
C+P 石炭—二叠系 Carboniferous-permian	河流 River
O 奥陶系 Ordovician	高速公路 Expressway





王屋神韵

ROMANTIC CHARM OF WANGWU

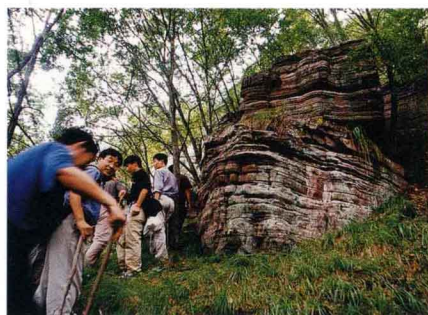
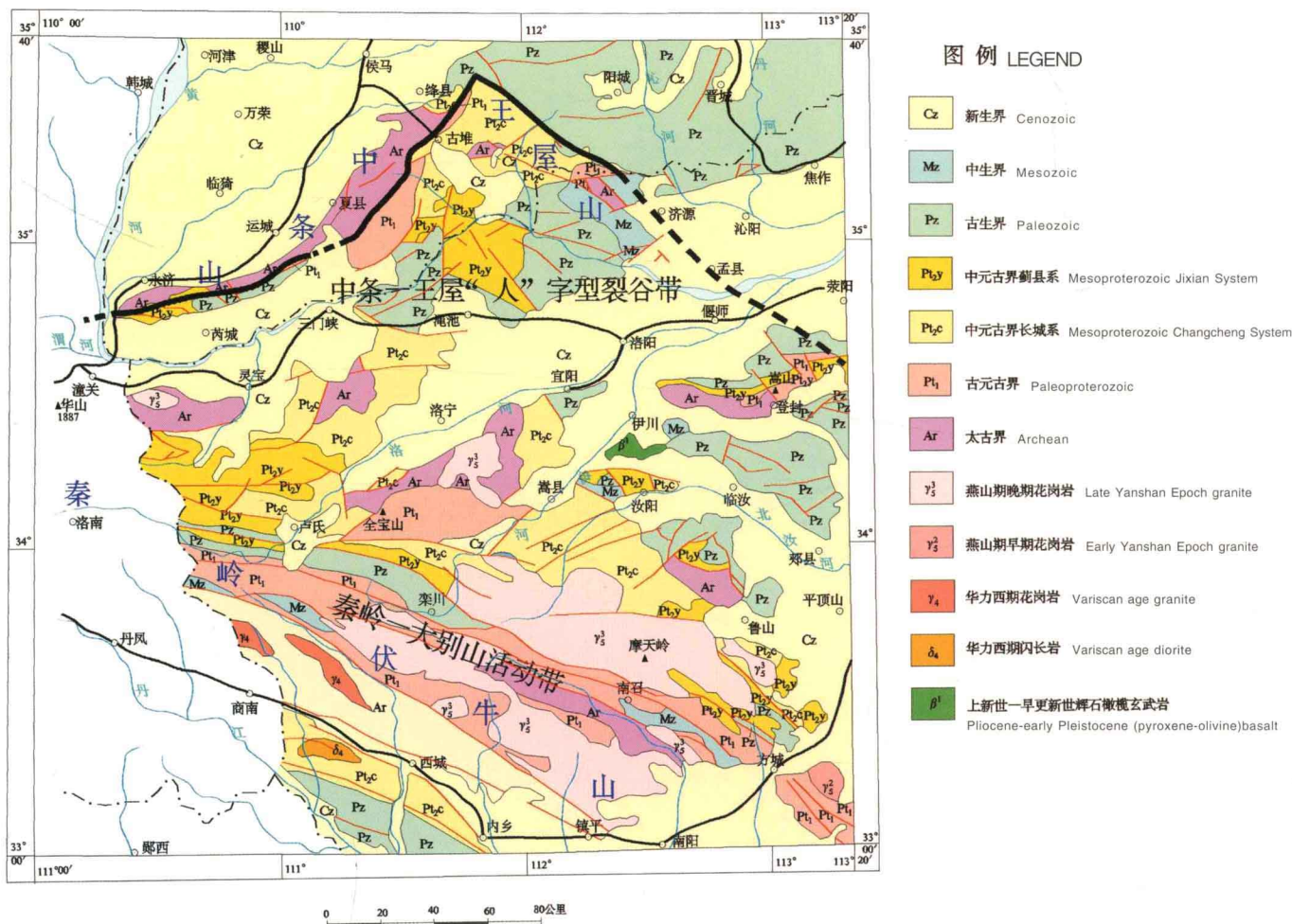
王屋神韵

距今 25-14.5 亿年之间，在具有全球性规模效应的超大陆裂解和拼接过程中，王屋山处于活动大陆边缘的中条山 - 王屋山人字型裂谷内，形成了古元古界变质岩和中元古界长城系火山岩。

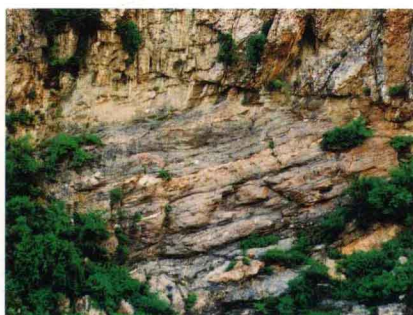
During the period of 2.5-1.45 billion years ago, Wangwushan was in the "人" -shape rift of Zhongtiaoshan-Wangwushan on the edge of active continent. The globe-wide Large-scale supercontinent cracking and matching formed the Paleoproterozoic metamorphic rocks and Mesoproterozoic Changcheng System's volcanic rocks.

中条山——王屋山“人”字型裂谷地质图

The geological map of "人" -shape rift of Zhongtiaoshan - Wangwushan



■ 中元古界蓟县系 (天坛山景区)
Mesoproterozoic Jixian system
(Tiantanshan Scenic Spot)



■ 新太古界林山群 (天坛山景区)
Neoproterozoic Lingshan group (Tiantanshan Scenic Spot)



■ 古元古界银鱼沟群 (天坛山景区)
Paleoproterozoic Yinyugou group
(Tiantanshan Scenic Spot)



■ 中元古界长城系(黑龙峡景区)

Mesoproterozoic Changcheng system (Heilong Gorge Scenic Spot)

ROMANTIC CHARM OF WANGWU

王屋神韵



■ 世界级地质工程景观——小浪底水库大坝

The largest geological engineering landscape over the world-Xiaolangdi Reservoir Dam



小浪底大坝，全长 1667 米，顶宽 15 米，底宽 864 米，坝高 154 米，是目前世界上规模最大的土石混合坝，也是世界级的地质工程景观。

Xiaolangdi Dam is the largest mixed dam of earth and rock in the world and also the world geological engineering landscape with a length of 1667m, top width of 15m and bottom width of 864m.





■ 汹涌澎湃(西滩景区) Rush of torrent (Xitan Scenic Spot)

大坝工程是小浪底最靓丽的风景，它不仅是治黄史上的丰碑，也是世界水利工程的杰作，投资额 420 亿元人民币。共创三项世界纪录，六项中国之最。水库蓄水后，在大坝上游形成了 272 平方公里的浩瀚水域，山水交融、水光潋滟。



The dam project is the most splendid landscape of Xiaolangdi, which is not only the monument in the history of treating the Yellow River, but also the masterpiece of world water projects, boasting an investment of RMB 42 billion yuan . It has created 3 world records and 6 firsts of China. After accumulation and storing, the reservoir has got 272 square kilometers watery field at the upper part of the dam where there are blended water and mountains, shining and brilliant.

ROMANTIC CHARM OF WANGWU

王屋神韵



王屋山，一座天造地设的王者之屋，是传说中愚公的故乡。西接中条，东连太行，像一条巨龙横亘于华北平原和黄土高原之间，滔滔黄河在其脚下流淌。



远古的王屋山，地处古代三河之要冲
中古的王屋山，是道教天下第一洞天
现代的王屋山，愚公精神是中华民族的宝贵财富

The ancient Wangwushan was located at the center of the ancient three rivers

The medium ancient Wangwushan was the first cave in the world of Taoism

Today's Wangwushan is Chinese nation's treasury of the spirit of the Old Foolish Man

■ 王者风范(天坛山景区)

Demeanour of king (Tiantanshan Scenic Spot)

Wangwushan, a house of king created by nature, is the hometown of the legendary Old Foolish Man, bordering the Zhongtiao to the west and connecting Taihang to the east, like a huge dragon lying between the North China Plain and the Loess Plateau with the roaring Yellow River flowing at its foot.