

Mountains and Plateaus of Rajasthan

Aravalli ranges

- The literal meaning of Aravalli - Range of Mountains.
- Aravalli ranges were formed 4.88 billion years ago in the Agha Mahakal period (Azoic Era, Pre Paleozoic Era, Pre-Primary Mahakalp) of the Precambri era by the action of folding from the Godavan land.
(Due to horizontal movement by the earth's endogenous force, when condition of compression arises in crustal rocks, then rocks wave-like curves are formed which are called folds. The ranges formed by folding are called folded mountain ranges.)
- The Aravalli Ranges are the oldest mountain ranges in the world, which is equivalent to Appalachian Mountains of North America.
- Before Aravalli ranges, Dehli order was also an extension of rocks, which was divided into three parts in Rajasthan -
 1. Alwar Group - Alwar
 2. Ajabgarh Group - Sirohi
 3. Rylo Group - Badmer
- Aravalli Ranges were formed due to sedimentation of the above three parts.
- The existence of the Dehli group is a new heritage so Aravalli Mountains are considered to be oldest range and mid portion of Aravalli is made of Dehli Ranges.
- At the time of formation of Aravalli its average height was 2800 meters but due to erosion with time its present height is 930 meters.
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Extension of Ranges

- Origin of Aravalli is believed to be in Minicoy of Arabian Sea, being submerged it is not visible so Arabian Sea is called Garbh Grah of Aravalli
- Aravalli starts from Palanpur in Gujarat and its end is considered to be at Rayalaseema (Raisina) Delhi.
- The Aravalli ranges are spread over the three states of India, Gujarat, Rajasthan, Haryana and the Union Territory of Delhi.
- About 80% part of Aravalli is located in Rajasthan.
- The total length of Aravalli is 692 km. Out of this 550 kms is located in Rajasthan.
- Extension of Aravalli ranges in Rajasthan starts from Khedbrahm (Brahmkheda) to Khetri Jhunjhunu.
- The extension of the central part of the Aravalli ranges is in Tonk - Sawai Madhopur – Karauli districts.
- The latitudinal extension of the Aravalli ranges is between $23^{\circ}20'$ north latitude to $28^{\circ}20'$ north latitude. The longitude range is between $72^{\circ}10'$ East Longitude to $77^{\circ}03'$ East Longitude.



- In Rajasthan Aravalli is extended from South West to North East direction, the height and width of Aravalli increases from North East to South West.
- The maximum width of Aravalli in Rajasthan is between Rajasmand to Banswara.
- The highest altitude is between Rajasmand to Sirohi.
- Maximum extension - in Udaipur district.
- Minimum extension – in Ajmer district.
- Highest altitude - in Sirohi district.
- Minimum altitude - in Jaipur district.
- The Aravalli mountain region is 9.3% of the total geographical area of Rajasthan and about 10% population resides in it.

Ancient and other names of Aravalli :-

- In Vishnu Purana it is called as Sumeru Parvat / Meru Parvat / Pripatra Parvat.
- Aravalli - in Gujarat
- Meru - in geographical language
- Ada Vata - in Rajasthani language
- Adawal - in Bundi
Very important - (Adavali hill is located in Bundi but it is not a part of Aravalli)
- Dosi ranges - in Haryana
- Arbuda Devi mountain - in Sirohi

Rivers originating from Aravalli

Name	Origin
Bedas / Ayed	Gogunda Hill - Udaipur
Banas	Khamnaur Hill - Rajasmand
Sabarmati	Kotda Hill - Udaipur
Sukdi	Sojat Hill – Pali
Kothari	Diver Hill - Rajasmand
Khari	Bijrawal Hill - Rajasmand
Luni	Nag mountain - Ajmer

Characteristics of the Aravalli Hills Region

- Comparison of Aravalli –
 1. Mountain - Appalachian Mountains
 2. Musical Instrument - Tanpura / Tandoora
 3. Body Part - ear like
- Total area of the ranges – 99771 km
- The Aravalli range is the highest mountain range situated between the Himalayan mountain region and the Western Ghats.
- The shape of northern part of the Aravalli ranges is like sheep-back and the shape of southern part is wing-shaped.
- The Aravalli ranges are part of the peninsular plateau region, which is named as the Great Indian Water Dividing Line.

(Great Indian water dividing line - 50 cm. The rain line passes parallel to the Aravallis, due to which more than 50 cm rainfall is in the east of the Aravallis and less than 50 cm in the west. The Aravalli Ranges divides river water of the Indus and Ganga river. That's why the Aravalli is called the great Indian water dividing line.)

- The Aravalli mountainous region has predominance of granite, neas, quartzite rocks of Dharwad order. That's why Aravalli is a rich region in terms of metallic minerals like iron ore, copper, lead, zinc, tungsten, silver etc.
- It is also called the museum of minerals, here most found ones are metallic minerals.
- The Aravalli and Vindhya ranges cut each other at right angle at Ranthambore Sawai Madhopur.
- Colorful hills are found in Ranthambore Sawai Madhopur.
- Garasia, Damor, Bhil, Kanjar, Kathodi tribes are found in Aravalli. The Aravalli ranges are said to be the shelter of tribals in Rajasthan.
- In the Aravalli hill region aboriginal tribes are mainly practice Jhuming or shifting agriculture which is known by different names like -
 1. Walra - Shifting agriculture practiced by the Garasia tribe
 2. Chimata - Jhuming agriculture practiced by Bhil tribe by burning forests
 3. Dajiya - Jhuming agriculture practiced by Bhil/Damor tribe by cutting down forests
 4. Vatra - Shifting agriculture practiced by Sahariya tribe
- There is expansion of red soil (mountain soil, inceptisol) in the Aravalli hill region. Red soil is useful for maize.

Classification of Aravalli Hills Region

- The Aravalli mountain region, extending in about middle of Rajasthan, from south-west to north-east, is divided into three parts on the basis of height.
 1. Northern Aravalli
 2. Middle Aravalli
 3. Southern Aravalli

Northern Aravalli – Extension Districts - Raipur, Alwar, Kar, Jhunjhunu.

- The extension of Northern Aravalli is located in Jaipur division.
- The average height of the northern Aravallis is 450 m.
- Major peaks of Northern Aravalli -
 1. Raghunathgarh (Sikar) - 1055 m. (Highest peak of Northern Aravalli in Rajasthan)
 2. Khoh (Jaipur) - 920 m.
 3. Bharuch (Alwar) - 792 m.
 4. Barwara (Jaipur) - 786 m.
 5. Babai (Jhunjhunu) - 780m.
 6. Bilali (Alwar) - 775 m.
 7. Bairath (Jaipur) - 704 m.
 8. Bhangarh (Alwar) - 649 m.
 9. Jaigarh (Jaipur) - 648 m.
 10. Nahargarh (Jaipur) - 599 m.
 11. There is no pass in North Aravalli.

(Pass-The narrow way located between the mountains, which is also called Nal or Ghat.)

Middle Aravalli –

- Middle Aravalli is extended in Ajmer district.
- Lowest altitude range, it is a range with most cuts
- Middle Aravalli is divided into two parts
 1. Low Hills of Shekhawati
 2. Merwara Hills

Low hills of Shekhawati -

- The low hills of Shekhawati are lower than other hills and having the most number of valleys
- The air from these valleys moves from west to east, so these are also called **wind valleys**.
- From these valleys Desert soil moves from west to east, hence desertification is increasing, it is also called **desert march**.
- Extension- Ajmer Beawar around Sambhar

Merwara hills

- Average height of Middle Aravalli - 550 m.
- Major peaks of Central Aravalli -
 1. Goramji - Ajmer - 934 m.
 2. Meriyaji (Todgarh) - Ajmer - 933 m.
 3. Taragarh - Ajmer - 873 m.
 4. Naag mountain - Ajmer - 795 m.
 5. Major Passes of middle Aravalli
 6. Bar Pass - Pali (it connects Marwar and Merwara, NH-162 passes.)
 7. Arnia - Ajmer
 8. Suraghat - Ajmer
 9. Peepli – Ajmer
 10. Parveria- Ajmer
 11. Shivpuri – Ajmer
- Beethli Hill (Ajmer) - Taragarh fort situated on the Beethli hill is also known as Garh Beethli.
- Bishop called Taragarh fort as Gibraltar of Rajasthan.

Southern Aravalli –

- The extension of Southern Aravalli is in Rajasmand-Sirohi-Udaipur districts.
- Average height of South Aravalli is 900 m.
- Major peaks of South Aravalli -
 1. Gurushikhar - Sirohi -1722 m. (highest peak of Rajasthan)
 2. Ser - Sirohi - 1597 m.
 3. Dilwara - Sirohi - 1442 m.
 4. Jarga - Udaipur - 1431 m.
 5. Achalgarh - Sirohi - 1380 m.
 6. Kumbhalgarh - Rajasmand - 1224 m.
 7. Rishikesh - Sirohi - 1017 m.

8. Kamal Nath - Udaipur - 1001 m.
9. Sajjangarh - Udaipur - 938 m.
10. Saira - Udaipur - 900 m.
11. Lilagarh - Udaipur - 874 m.
12. Nagpani - Udaipur - 867 m.
13. Gogunda - Udaipur - 840 m.

- In Rajasthan the peaks of Aravalli having highest altitude are in Sirohi district. Whereas in Rajasthan the highest number of peaks of Aravalli are in Udaipur district.
- The hills of Jaswantpura are situated in the west of the South Aravalli, in the west of the hills of Jaswantpura, the high land of Ranibara is located in Jalore. The high land of Ranibara is a land without trees.
- The highest peak of the hills of Jaswantpura is Dora Parvat.
- Israna Bhakar is the highest peak of Jalore mountain.
- Jalore mountain is located near Siwana, it is also called Chappan ka Bhakar in the local language.
- Haldeshwar pilgrimage is located on these ranges.

Major Passes of Southern Aravalli

- Sarup Ghat - Pali
- Desuri Pass - Pali
- Someshwar Pass - Pali
- Kamli Ghat - Rajasmand
- Goram Ghat - Rajasmand
- Hathigudha Pass - Rajasmand
- Kewra ki Naal - Udaipur
- Debari Pass - Udaipur
- Haathi Pass - Udaipur
- Phulwari ki Naal - Udaipur
- Jeelwa / Pagalya Naal – Udaipur

Major Plateau of Aravalli

1. Odia Plateau -

- The highest plateau of Rajasthan located in Sirohi (1360 m height)
- Mount Abu is the highest city of Rajasthan and the highest freshwater lake Nakki is located on Oriya plateau.

2. Abu Plateau -

- The second highest plateau of Rajasthan (1295 m height) located at the south of the Oriya plateau at Sirohi
- The Abu plateau is an example of a betholic structure.
- Bentholic - a structure formed by deposition of magma released during volcanic action in a domed shape at great depth inside the Earth.
- From the point of view of topography, the plateau of Abu has been named Inselberg.

3. Plateau of Bhorath -

- Situated between Gogunda (Udaipur) to Kumbhalgarh (Rajasthan) it's a 1225 metre high plateau region.
 - The third highest plateau of Rajasthan which acts as a water divisor between the Arabian Sea and the Bay of Bengal. (The highest peak of Udaipur, Jarga (1431 m) is situated on the plateau of Bhorath.)
4. **Plateau of Mesa -**
 - It is a Plateau eroded by the Berach and Gambhiri rivers in Chittorgarh
 - Chittorgarh fort is situated on the plateau of Mesa.
 5. **Mandesara Plateau -** Chittorgarh
 6. **Lasodia Plateau –** It is a rugged plateau area situated in east of Jayasmand Lake (the most eroded plateau of Rajasthan.)
 7. **Plateau of Deshharo –** It is a plateau area which is situated between the hills of Jarga and Raga in Udaipur and remains green throughout the year.
 8. **Upparmal plateau -** The plateau area situated between Bijolia to Bhaisrodgarh.
 9. **Plateau of Bhomat -** It is the plateau area situated in the middle of Udaipur - Dugarpur – Banswara, where Bhomat tribe resides.
 10. **Kakanwadi plateau -** Bhangarh fort of Alwar and Kakanwadi fort are situated on the plateau of Kakanwadi.

Major Mountains and Hills of Aravalli

- **Girwa-** The halfmoon-shaped or saucer-shaped hills found around Udaipur are called Girwa in the local language.
- **Bhakar –** These are the hills with steep slopes located in Eastern Sirohi
- **Mewal -** The hills situated in the middle of Dungarpur, Banswara are called Mewal in the local language.
- **Magra -** The residual hills located in the north-west of Udaipur are called Magra. For example, Magra of Makad, Magra of Banki, Kaman Magra, Lega Magra etc.