Raje Ramrao Mahavidyalaya, Jath,

Tal. Jath,Dist. Sangli

Department of Geography

Soil & Rock Museum

Brief Information of Rock

1. Gabbro Syenite Rock

Location: Jath, Dist. Sangli, MH

Brief Information: The complex is mainly composed of gabbro and syenite & is of the Silurian-Devonian age. The Concord Gabbro Syenite Complex is a part of a larger suite of twenty plutons that form a chain extending almost 500 km, which lie within the Charlotte Metamorphic belt. which form horseshoe-shaped rings around the gabbro.

Collected By: Mr. N.G. Lawte

2. Charcoal

Location: Chandrapur, Dist. Chandrapur, MH

Brief Information: Charcoal is an organic carbon compound. charcoal is produced by the incomplete combustion of plant and animal products. Charcoal is generally obtained from the burning of plant parts like wood, peat, bones, and cellulose. It is a highly porous microcrystalline structure. Charcoal is mixed with clay to save energy in the brick formation process Charcoal has a porous texture and a negative electrical charge.

Collected By: Dr. S.G. Gavade

3. Raw Yellow Jasper Rock

Location: Jath, Dist. Sangli, MH

Brief Information: Yellow Jasper. Cleanse, realign, and boost your chakras with this slow yet powerful gemstone. Yellow Jasper activates the Solar Plexus Chakra, it grounds, brings inner-strength, and mental clarity. This gemstone encourages confidence, courage, and enthusiasm. It helps you deflect negative energy from other people such as jealousy, gossip, and spite. With Yellow Jasper you'll feel balanced, stable, and prepared.

Collected By: Miss. V.P. Kamble

4. River Stone

Location: Jath, Dist. Sangli, MH

Brief Information: River stone is a sedimentary rock, a form of limestone. It is not to be confused with the red and yellow Patuxent River Stone, an agate and cryptocrystalline form of quartz. River stone, or river stone, is also a used as a generic term for an undifferentiated mix of rocks found in a river bed.

Collected By: Dr. P.B. Gaikwad

5. Charcoal

Location: Chandrapur, Dist. Chandrapur, MH

Brief Information:Charcoal exists in many different forms. It exists in the impure form as the microcrystalline graphitic form. The charcoal structure shows it consists of an aromatic structure or carbon (carbon ring with alternate double and single bond). This aromatic structure of charcoal consists of oxygen and carbon-free radicals.

Collected By: Dr. S.G. Gavade

6. Red Sandstone

Location: Jath, Dist. Sangli, MH

Brief Information: Red sandstone is a type of sedimentary rock. Over time, the small quantities of iron-rich minerals in the sand break down and the iron is oxidized into hematite crystals (Fe2O3) that form as very thin paint-like coating on the quartz sand grains. The hematite crystals absorb all light colors except red which they reflect, giving the sandstones their red color.

Collected By: Mr. A.S. Tike

7. Green Jasper Rock

Location: Jath, Dist. Sangli, MH

Brief Information: The green jasper stone is a green colored gemstone belonging to the oxide mineral group, quartz. It receives its green coloring from the iron silicate compounds present in the stone. This stone is said to have been formed when fine pyroclastic or volcanic ash became a solid material.

Collected By: Mr. L.K. Masal

8. Heulandite Crystal Cluster

Location: Jath, Dist. Sangli, MH

Brief Information: Heulandite is the name of a series of tecto-silicate minerals of the zeolite group. Heulandite is a member of a group of zeolite minerals with a characteristic platy habit. Others in the group are stilbite, epistilbite, and brewsterite. These minerals have similar modes of occurrences, physical properties, and molecular structures.

Collected By: Mr. Y.S. Shinde

9. Crystal Stone

Location: Ajanta-Vindhya Mountain

Brief Information: A crystal, also known as a crystalline solid, is a solid material whose components (atoms, molecules, or ions) are arranged in a closely ordered microscopic arrangement to form a crystal lattice. Rock crystal bonds earth and water radiation into positive energy. It cleanses the mind and soul. It also helps to dissolve energy blockages. Anyone wearing rock crystal is helped to make just, clear decisions.

Collected By: Mr. Y.S. Shinde

10. Green Jasper Stone

Location: Jath, Dist. Sangli, MH

Brief Information: The green jasper stone is a green colored gemstone belonging to the oxide mineral group, quartz. It receives its green coloring from the iron silicate compounds present in the stone. This stone is said to have been formed when fine pyroclastic or volcanic ash became a solid material.

Collected By: Mr. N.G. Lawte

11. Quartz Silica Stone

Location: Jath, Dist. Sangli, MH

Brief Information: Quartz silica, also known as crystalline silica or crystalline silicone dioxide, is a mineral that is found in nature. It is one of the most abundant minerals on earth, and there are hundreds of different varieties of it, some of which are gemstones. The molecular structure of quartz silica is unusual and allows stones composed of the material to grow to large sizes over time. There are many different forms of quartz silica that are found in nature. Citrine, amethyst, rose quartz, and smoky quartz are some of the common varieties of the mineral.

Collected By: Dr. P.B. Gaikwad

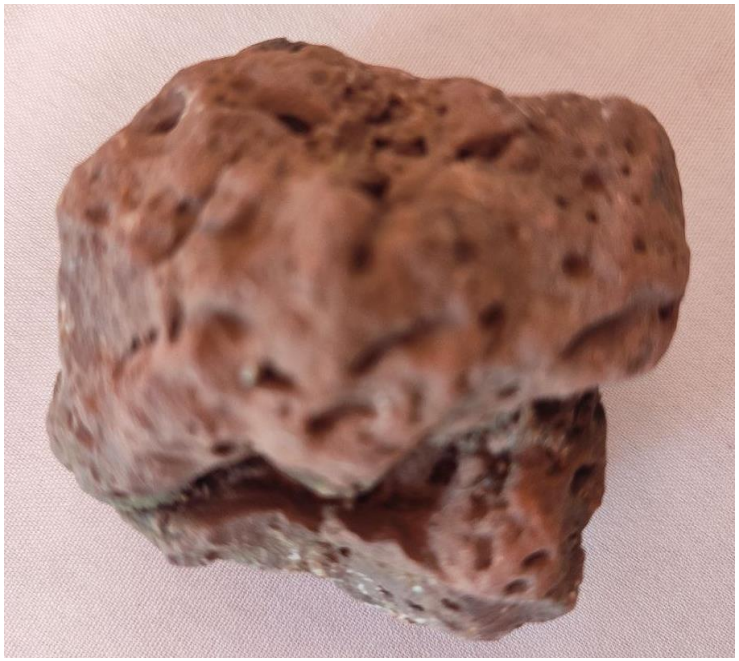
12. Uncracked and Unopened Quartz

Location: Jath, Dist. Sangli, MH

Brief Information: A Quartz Geode is a hollow rock rich is Quartz deposits. The inside of the Geode will be linked with white or clear Quartz Crystals. Quartz Geodes can be used once cracked open to cleanse Crystals by absorbing the energy. This stone is huge and heavy. I do combine shipping, however this stone will just barely fit in a large box so it will not combine with any other geodes. They are found in creeks and fields and are hollow or solid inside. They are filled with various mineral deposits, often small quartz crystals.

Collected By: Mr. L.K. Masal

13. Scoria Rock



Location: Jath, Dist. Sangli, MH

Brief Information: Scoria is a pyroclastic, highly vesicular, dark-colored volcanic rock that was ejected from a volcano as a molten blob and cooled in the air to form discrete grains or clasts. It is typically dark in color (generally dark brown, black or purplish-red), and basaltic or andesitic in composition.

Collected By: Miss. V.P. Kamble

14. Iron Meteorites Rock

Location: Jath, Dist. Sangli, MH

Brief Information: Iron meteorites typically consist of approximately 90 to 95% iron, with the remainder comprised of nickel and trace amounts of heavy metals including iridium, gallium and sometimes gold.

Collected By: Sanadi Yasin Husenbhash

15. Limestone Rock

Location: Jath, Dist. Sangli, MH

Brief Information: Limestone is a sedimentary rock composed principally of calcium carbonate (calcite) or the double carbonate of calcium and magnesium (dolomite). It is commonly composed of tiny fossils, shell fragments and other fossilized debris.

Limestone is usually gray, but it may also be white, yellow or brown. It is a soft rock and is easily scratched. It will effervesce readily in any common acid. Limestones may vary greatly in texture and porosity from coquina, which is a matrix of whole or pieces of sea shells loosely cemented by calcite, to oolitic limestones and microcrystalline limestones whose structures are so fine that they can be seen only under magnification.

Collected By: Dr. P.B. Gaikwad

16. Metamorphic Rock

Location: Jath, Dist. Sangli, MH

Brief Information: Metamorphic rocks started out as some other type of rock, but have been substantially changed from their original igneous, sedimentary, or earlier metamorphic form. Metamorphic rocks form when rocks are subjected to high heat, high pressure, hot mineral-rich fluids or, more commonly, some combination of these factors. Metamorphic rocks make up a large part of the Earth's crust and form 12% of the Earth's land surface. They may be formed simply by being deeply buried beneath the Earth's surface, where they are subject to high temperatures and the great pressure of the rock layers above.

Collected By: Nilajagi Laxmi Shrimant

17. Sedimentary Rock

Location: Jath, Dist. Sangli, MH

Brief Information: Sedimentation is the combined name for all the processes that cause organic and mineral particles to settle. The particle that helps in forming the sedimentary rock is called sediment. This sediment is formed with the help of erosion and weathering from the source area and is then transported to the deposition place by the wind, water, ice and glaciers, which are agents of denudation. The sedimentary rocks are classified into three different types: Organic, Clastic and Chemical Sedimentary Rocks.

Collected By: Jadhav Tejaswini Rama

18. Siltstone Sedimentary Rock

Location: Jath, Dist. Sangli, MH

Brief Information: Siltstone is a clastic sedimentary rock that formed from grains whose sized between that of sandstone and mudstone. It can found different environmental conditions different color and textures. Siltstone generally are red and gray color with flat bedding planes. Darker colored siltstone have plant fossils and other carbon-rich matter. It is hard and durable and do not easily split into thin particles or layer.

Collected By: Bajantri Shruti Muttappa

19. Schist Metamorphic Rock

Location: Jath, Dist. Sangli, MH

Brief Information: Schist is medium grade metamorphic rock, formed by the metamorphosis of mudstone / shale, or some types of igneous rock, to a higher degree than slate, i.e. it has been subjected to higher temperatures and pressures. It usually forms on a continental side of a convergent plate boundary where sedimentary rocks, such as shales and mudstones, have been subjected to compressive forces, heat, and chemical activity.

Collected By: Ingavale Rajashri Sukhdev

20. Bauxite Mineral Rock

Location: Palshi, Tal. Khanapur, Dist. Sangli, MH

Brief Information: Bauxite is a sedimentary rock with a relatively high aluminium content. It is the world's main source of aluminium and gallium. Bauxite consists mostly of the aluminium minerals gibbsite (Al(OH)3), boehmite (Y-AlO(OH)) and diaspore (α-AlO (OH)), mixed with the two iron oxides goethite (FeO(OH)) and haematite (Fe2O3), the aluminium clay mineral kaolinite (Al2Si2O5(OH)4) and small amounts of anatase (TiO2) and ilmenite (FeTiO3 or FeO.TiO2). Bauxite appears dull in luster and is reddish-brown, white, or tan.

Collected By: Prof. (Dr) S.S. Patil

21. Mundrabilla Iron Meteorite

Location: Palshi, Tal. Khanapur, Dist. Sangli, MH

Brief Information: Iron meteorites, also called siderites or ferrous meteorites, are a type of meteorite that consist overwhelmingly of an iron–nickel alloy known as meteoric iron that usually consists of two mineral phases: kamacite and taenite. Most iron meteorites originate from cores of planetesimals, with the exception of the IIE iron meteorite group. Iron meteorites: which are almost completely made of metal. stony-iron meteorites: which have nearly equal amounts of metal and silicate crystals. stony meteorites: which mostly have silicate minerals.

Collected By: Prof. (Dr) S.S. Patil

22. Laterite Rock

Location: Jath, Dist. Sangli, MH

Brief Information: The term laterite means a red rock or red earth deposit. Laterites are formed by the decomposition of different kind of rocks, under conditions yielding aluminum and iron hydroxides. Laterites consist mainly of quartz, zircon, and oxides of titanium, iron, tin, aluminum and manganese, which remain during the course of weathering. Quartz is the most abundant relic mineral from the parent rock. Laterites vary significantly according to their location, climate and depth.

Collected By: Kodag Pranali Bapuso

23. White Quartize Rock

Location: Jath, Dist. Sangli, MH

Brief Information: Quartzite is a nonfoliated metamorphic rock that consists mostly of quartz. It's usually a white to pale gray rock, but occurs in other colors, including red and pink (from iron oxide), yellow, blue, green, and orange. The rock has a grainy surface with a sandpaper texture, but polishes to a glassy shine.

Collected By: Patil Vaijanta Sudhakar

24. Iron Ore Rock

Location: Palshi, Tal. Khanapur, Dist. Sangli, MH

Brief Information: Iron ores are rocks and minerals from which metallic iron can be extracted. There are four main types of iron ore deposit: massive hematite, which is the most commonly mined, magnetite, titanomagnetite, and pisolitic ironstone. These are sedimentary rocks that have alternating layers of iron-rich minerals and a fine-grained silica rock called chert. Many of the banded iron formations that are being mined today were formed millions of years ago.

Collected By: Prof. (Dr) S.S. Patil

25. Meteorite Rock

Location: Jath, Dist. Sangli, MH

Brief Information: A meteorite is a rock from space that passes through the atmosphere and survives impact with the ground. Most meteorites originate from larger asteroid bodies orbiting the Sun in the asteroid belt between Mars and Jupiter. Collisions and gravitational interactions between asteroids can send smaller pieces into the inner solar system where they can intersect with Earth's orbit to become part of the thousands of meteorites that fall to earth. Several larger meteoroids collide with the Earth every day with some landing in the oceans and others on land.

Collected By: Shinde Anil Pandurang

26. Red Sandstone Rock

Location: Palshi, Tal. Khanapur, Dist. Sangli, MH

Brief Information: Red sandstone is a type of sedimentary rock. Over time, the small quantities of iron-rich minerals in the sand break down and the iron is oxidized into hematite crystals (Fe2O3) that form as very thin paint-like coating on the quartz sand grains. The hematite crystals absorb all light colors except red which they reflect, giving the sandstones their red color.

Collected By: Prof. (Dr) S.S. Patil

27. Carbonatite Igneous Rock

Location: Jath, Dist. Sangli, MH

Brief Information: An igneous rock containing more than 50% modal primary carbonate. A carbonate rock of apparent magmatic origin, generally associated with kimberlites and alkalic rocks. Carbonatite is a unique igneous rock type, in that it formed predominantly of carbonate minerals (of which it must contain >50 modal % by definition) along with lesser silicates, phosphate minerals, and oxides.

Collected By: Bhandare Aarti Tukaram

28. Hematite Rich Iron Ore

Location: Palshi, Tal. Khanapur, Dist. Sangli, MH

Brief Information: Hematite, also spelled haematite, heavy and relatively hard oxide mineral, ferric oxide (Fe_2O_3), that constitutes the most important iron ore because of its high iron content (70 percent) and its abundance. Hematite naturally occurs in black to steel or silver-gray, brown to reddish-brown, or red colors. It is mined as an important ore mineral of iron. It is electrically conductive. While these forms vary, they all have a rust-red streak. Hematite is not only harder than pure iron, but also much more brittle. Maghemite is a polymorph of hematite.

Collected By: Prof. (Dr) S.S. Patil

29. Rich Iron Ore Rock

Location: Palshi, Tal. Khanapur, Dist. Sangli, MH

Brief Information: Hematite, also spelled haematite, heavy and relatively hard oxide mineral, ferric oxide (Fe2O3), that constitutes the most important iron ore because of its high iron content (70 percent) and its abundance. Hematite naturally occurs in black to steel or silver-gray, brown to reddish-brown, or red colors. It is mined as an important ore mineral of iron. It is electrically conductive. While these forms vary, they all have a rust-red streak. Hematite is not only harder than pure iron, but also much more brittle. Maghemite is a polymorph of hematite.

Collected By: Prof. (Dr) S.S. Patil

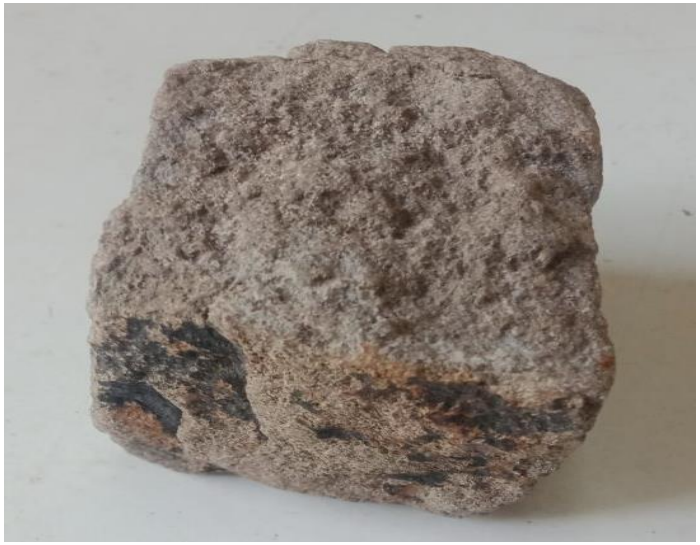
30. Red Mud Rock

Location: Palshi, Tal. Khanapur, Dist. Sangli, MH

Brief Information: Red mud, now more frequently termed bauxite residue. It is composed of various oxide compounds, including the iron oxides which give its red colour. Mudrocks are a class of fine-grained siliciclastic sedimentary rocks. The varying types of mudrocks include siltstone, claystone, mudstone, slate, and shale. Most of the particles of which the stone is composed are less than 1⁄16 mm (0.0625 mm; 0.00246 in) and are too small to study readily in the field. At first sight, the rock types appear quite similar; however, there are important differences in composition and nomenclature.

Collected By: Prof. (Dr) S.S. Patil

31. Sandstone



Location: Jath, Dist. Sangli, MH

Brief Information: Sandstone is a sedimentary rock composed mostly of quartz sand, but it can also contain significant amounts of feldspar, and sometimes silt and clay. Sandstone that contains more than 90% quartz is called quartzose sandstone. When the sandstone contains more than 25% feldspar, it is called arkose or arkosic sandstone. When there is a significant amount of clay or silt, geologists refer to the rock as argillaceous sandstone. The color of sandstone varies, depending on its composition. Argillaceous sandstones are often gray to blue.

Collected By:Bhandare Aarti Tukaram

32. Red Hematite Rock

Location: Jath, Dist. Sangli, MH

Brief Information: Hematite is the mineral form of iron(III) oxide and the principal colorant in red, brown, and purple iron oxide-based pigments, both natural and synthetic. Hematite is a significant source of iron oxide earth pigments and a component of ocher, umber, and sienna colors. The mineral is found in many places throughout the earth, a primary source of the pigment from soft, red earthy masses of hematite called ‘paint ore.’

Collected By: Athani Jotiram Suresh

33. Ochre Rock

Location: Gadchiroli, Dist. Gadchiroli, MH

Brief Information: Ochre, a native earth coloured with hydrated iron oxide. It varies in colour from pale yellow to deep red, brown, and violet. There are two kinds: one has a clayey basis, while the other is a chalky earth. The former variety is in general the richer and purer in colour of the two. Both kinds are widely distributed in beds or pockets, mainly in stratified rocks and rubble and rarely as extensive deposits. Ochres are also artificially prepared in large quantities. Mars yellow is either a pure hydrated ferric oxide or an intimate mixture of that substance with an argillaceous or calcareous base.

Collected By: Mr. Mahendr Gaikwad

34. Raw White Quartz Stone

Location: Jath, Dist. Sangli, MH

Brief Information: White quartz, also known as milk quartz, is a popular and versatile gemstone with a wide range of uses. It is a crystalline form of silica and is found in many different geological environments all around the world. The crystalline structures of this quartz are highly organized, with each atom arranged in an orderly fashion – this makes it one of the most stable minerals available. It often appears naturally in stratified deposits such as veins, sedimentary rocks, and metamorphic rocks.

Collected By: Dr. P.B. Gaikwad

35. Beidellite Mineral Rock

Location: Jath, Dist. Sangli, MH

Brief Information: Beidellite are the principal constituent of bentonite clay deposits. These have been formed by the alteration of eruptive igneous rocks. They occur in sedimentary and metamorphic rocks, in deposits of hydrothermal origin, and soils.
Formula : $Ca_{0.17}Al_{2.34}Si_{3.66}O_{10}(OH)_2$

Collected By: Miss. V.P. Kamble

36. Turquoise Gemstone

Location: Jath, Dist. Sangli, MH

Brief Information: Turquoise is a member of phosphate mineral with chemical the formula CuAl6 (PO4)4(OH) 8·4H2O. Turquoise is an opaque, blue-to-green mineral that is a hydrated phosphate of copper and aluminium. This mineral usually occurs in massive or microcrystalline forms, as encrustations or nodules, or in veins. Crystals are rare; when found, they occur as short, often transparent prisms. Turquoise varies in color from sky-blue to green, depending on the amount of iron and copper it contains.

Collected By: Mr. L.K. Masal

37. Pyrrhotite - Pentlandite Ore

Location: Jath, Dist. Sangli, MH

Brief Information: Pyrrhotite is also called magnetic pyrite, because the color is similar to pyrite and it is weakly magnetic. The magnetism decreases as the iron content decreases, and troilite is non-magnetic. Pyrrhotite is generally tabular and brassy/bronze in color with a metallic luster. The mineral occurs with mafic igneous rocks like norites, and may form from pyrite during metamorphic processes. Pyrrhottie is associated and mined with other sulfide minerals like pentlandite, pyrite, chalcopyrite, and magnetite, and has been found globally.

Collected By: Mr. N.G. Lawte

38. Lepidocrocite

Location: Jath, Dist. Sangli, MH

Brief Information: Lepidocrocite (γ-FeO(OH)), also called esmeraldite or hydrohematite, is an iron oxide-hydroxide mineral. Lepidocrocite has an orthorhombic crystal structure, a hardness of 5, specific gravity of 4, a submetallic luster and a yellow-brown streak. It is red to reddish brown and forms when iron-containing substances rust underwater. Lepidocrocite is commonly found in the weathering of primary iron minerals and in iron ore deposits. The structure of lepidocrocite is similar to the boehmite structure found in bauxite and consists of layered iron(III) oxide octahedra bonded by hydrogen bonding via hydroxide layers

Collected By: Dr. P.B. Gaikwad

Brief Information of Soil

1. Red Soil

Location: Jath, Dist. Sangli, MH

Brief Information: Red soil is a type of soil that typically develops in warm, temperate, and humid climates. Red soil is formed from the weathering of rocks that contain iron oxides. The most common type of rock that contributes to red soil is called basalt. The process of weathering breaks down the basalt into smaller pieces, and then the smaller pieces are broken down further into silt and clay. The iron oxides in the rocks are what give the soil its reddish colour. Red soil is also well-drained, which is important for agriculture. Red soil helps plants to grow better. The red colour of the soil comes from the iron oxide in the rocks.

Collected By: Dr. P.B. Gaikwad

2. Black Soil

Location: Jath, Dist. Sangli, MH

Brief Information: Black soil is also known as Chernozem. It contains a high percentage of humus. phosphoric acid, phosphorus as well as ammonia. The black colour is due to the presence of a small proportion of titaniferous magnetite or iron and black constituents of the parent rock. The pH of black soil ranges from 7.2–8.5 at २५° C. The soil is rich in Potash/Calcium/Magnesium but less in Nitrogen/Phosphate content. In general, black soils of uplands are of low fertility while those in the valleys are very fertile.

Collected By: Kodag Pranali Bapuso

3. Limestone Soil

Location: Girdi, Dist. Solapur, MH

Brief Information: These are soils derived from chalk and limestone rocks and contain various amounts of calcium carbonate, between 5% and 50%. Limestone soils are naturally alkaline with high pH levels. These soils tend to be neutral shades of white, gray or beige, and have ancient origins. After water receded from now-dry seabeds, an array of shells, coral and other debris accumulated to form calcified sediments.

Collected By: Mr. L.K.Masal

4. Grey Soil

Location: Location: Jath, Dist. Sangli, MH

Brief Information: Soil in anaerobic, saturated environments may appear gray or blue in color due to the redox reduction and/or depletion of iron. In an anaerobic soils, microbes reduce iron from the ferric (Fe3+) to the ferrous (Fe2+) form. Manganese may also be reduced from the manganic (Mn4+) to the manganous (Mn2+) form, though iron reduction is more common in soil.The reduced iron compounds cause poorly drained soil to appear gray or blue, and because reduced iron is soluble in water.This often exposes the light gray colors of bare silicate minerals, and soils with a low chroma from iron reduction or depletion are said to be gleyed.

Collected By: Kodag Pranali Bapuso

5. Pale Red Soil

Location: Jath, Dist. Sangli, MH

Brief Information: soil color is often the most visually apparent property of soil. While color itself does not influence the behavior or practical use of soils, it does indicate important information about the soil organic matter content, mineralogy, moisture, and drainage.Red soils include multiple soil types (e.g. ultisols, alfisols, oxisols) that are classified as red soil when they develop a distinct reddish color, which can vary from reddish brown to reddish yellow due to their high iron content.

Collected By: Bhandare Aarti Tukaram

6. Pale Black Soil

Location: Jath, Dist. Sangli, MH

Brief Information: The development and distribution of color in soil results from chemical and biological weathering, especially redox reactions. As the primary minerals in soil parent material weather, the elements combine into new and colorful compounds. Soil conditions produce uniform or gradual color changes, while reducing environments result in disrupted color flow with complex, mottled patterns and points of color concentration. S the black soils found in the lava-covered areas are the most conspicuous.

Collected By: Kodag Pranali Bapuso