

## Field Trip PRE-3 Cretaceous Building Stones of Vienna

HERBERT SUMMESBERGER<sup>1</sup>

<sup>1</sup>Natural History Museum Vienna, Burgring 7, 1010 Vienna, Austria  
<herbert.summesberger@nhm-wien.ac.at>.

20 August 2017



Text and text-figures are taken/translated from SUMMESBERGER & SEEMANN (2008).  
All photographs by: Alice Schumacher (NHM Wien)

### Stop 1. Maria Theresia Monument

(SUMMESBERGER & SEEMANN, 2008: p. 8, No. 1)

Opening ceremony: 13. Mai 1888 (birthday of Empress Maria Theresia, 1717–1780).

Bronze figures: Caspar von Zumbusch (1830–1915).

Architect: Carl von Hasenauer (1833–1894).

Foundation: bricks.

Base: Granite, Bohemian Massif.

Age: Variscan (300–350 Ma).

Origin: Mauthausen, Upper Austria.

Pedestal: Cistec “Granite” (granodiorite) from Pilsen area (Czech Republic).

Age: Variscan (300–350 Ma).

Pillars: Alpine serpentinite “Sterzinger Serpentin” from Vipiteno, Alto Adige, Italia.

Age: 160 Ma.



### Stop 2. Natural History Museum

(SUMMESBERGER & SEEMANN, 2008: p. 11, No. 3)

1898 opened by Emperor Franz Joseph I. (1830–1916; see the monograms “F.J.”).

Architects: Gottfried Semper (1803–1879), Carl von Hasenauer.

Neorenaissance style.

Building stone: Sandstone (Facade) and bricks.

Age: Neogene.

Origin: Eggenburg – North of Vienna (Lower Austria); Slovenia, Croatia.

First general director: Ferdinand von Hochstetter, geologist (1829–1884).

## IMPERIAL PALACE

### Stop 3. Äußeres Burgtor

(SUMMESBERGER & SEEMANN, 2008: p. 15, No. 6)

(Outer Gate of the Imperial Palace), 1821–1824.

Architects: Luigi Cagnola (1762–1833), Peter von Nobile (1774–1854).

Building stone: Conglomerate.

Age: Neogene.

Origin: Wöllersdorf, South of Vienna.



**Ringstraße** Constuction period since 1855.

The area between the former city walls and the surrounding villages – the “Glacis” – was sold by the government to wealthy private people who built several hundreds of Palais along the Ringstraße. From the incoming money the Opera House, the Burgtheater, the House of Parliament, the Museum of Fine Arts and Natural History Museum were founded. The monumental buildings consist mainly of brick constructions, mostly covered by natural stone, which was often integrated into in the structure itself.

**Stop 4. Heldenplatz** (Place of Heroes)

(SUMMESBERGER & SEEMANN, 2008: p. 16, No. 7)

Two equestrian monuments: Prince Eugene of Savoy (1663–1736) and Archduke Carl  
Pedestal: Untersberg conglomerate with rudists and pebbles bored by Lithophaga mussels.

Age: Cretaceous, about 90 Ma.

Origin: Untersberg/Salzburg, Austria.



**Stop 5. Neue Hofburg** (Imperial Castle)

(SUMMESBERGER & SEEMANN, 2008: p. 20, No. 9)

Building stone: Marzana limestone.

Age: Cretaceous.

Origin: Marzana (today: Marčana), Croatia.



**Stop 6. Innerer Burghof** (Inner Courtyard)

(SUMMESBERGER & SEEMANN, 2008: p. 20, No. 10)

Floor: Granite from Upper Austria.

Monument Emperor Franz I. (1768–1835)

Pedestal: Granite; Bohemian Massif.

Age: Variscian (300–350 Ma).

Origin: Mauthausen, Upper Austria.

**Stop 7. Schweizertor** (Suisse Gate)

Surviving renaissance element in the Imperial Palace.

Inside: The oldest known (1552) relief with the “Habsburg Eagle” as the heraldic animal of the Austro-Hungarian coat of arms on the fountain basin made of “Kaiserstein” limestone.

Age: Neogene.

Origin: Kaisersteinbruch quarry, Lower Austria.



**Stop 8. Entrance to the former Burgtheater (Imperial Court Theater)**

Passing through the “Inneres Burgtor”, on the right hand side the preserved entrance to the former “Burgtheater” can be seen, which was demolished when the “Inneres Burgtor” was built.

**Stop 9. Inneres Burgtor, Michaelertrakt (Inner Gate of the Imperial Palace)**

(SUMMESBERGER & SEEMANN, 2008: p. 23, No. 11)

This part of the Imperial Palace was built (1889–1893) after original baroque plans of the famous architects Lucas von Hildebrandt (1668–1745) and Fischer von Erlach (1656–1723) during the “Ringstraßen” building period.

Monolithic Hercules statues:  
Bryozoan limestone.

Age: Neogene.

Origin: Zogelsdorf, North of Vienna.



**MICHAELERPLATZ AND KOHLMARKT**

**Stop 10. Michaelerplatz (St. Michael’s place, pedestrian area)**

(SUMMESBERGER & SEEMANN, 2008: p. 23, No. 12)

Excavations of Roman and medieval foundations.

**Stop 11. Loos Haus (Loos House)**

(SUMMESBERGER & SEEMANN, 2008: p. 24, No. 13)

Cultural monument.

Architect: Adolf Loos (1870–1933), pioneer of modern architecture in Vienna.

Built after Loos’ then futuristic ideas without decoration of the Facade (“Haus ohne Augenbrauen” → “House without eye-brows” nicknamed by the Viennese).



Decoration stone: “Cipollino”, greenschist interbedded with white marble layers  
Origin: Greece, island of Evvia. This stone was used since Roman times all over the Roman Empire.

**Stop 12. Michaelerkirche**

(St. Michael’s Church, 1220)

Romanesque style with early gothic architectural elements. 1276 rebuilt after a big fire.

Bell: damaged by the earthquake of Neulengbach 1590.

Mozart Requiem: premiere 1791.

Famous organ by Johann David Sieber (1670–1723) built in 1714, recently restored.

### Stop 13. Großes Michaeler Haus

(SUMMESBERGER & SEEMANN, 2008: p. 27, No. 14)  
1750 lived Joseph Haydn (1732–1809) here contemporaneously with Princess Esterhazy and the Librettist Pietro Metastasio, the Imperial Court poet (poeta Caesareus) during Emperor Karl's VI reign, buried at St. Michael's church.

Inside: yard with sculptures by Ben Siegel in Untersberger "marble".



### Stop 14. Buchhandlung Manz

(bookshop, designed by Adolf Loos, 1870–1933, in 1912)  
(SUMMESBERGER & SEEMANN, 2008: p. 28, No. 16)

Cultural monument.

Facade: Black Devonian decoration stone from Germany.



### Stop 15. Artariahaus

(SUMMESBERGER & SEEMANN, 2008: p. 28, No. 17)

Architect: Max Fabiani (1865–1962) in 1912, student of Otto Wagner (1841–1918), Art Nouveau.

Facade: White Carrara marble, Italy and reddish Jurassic limestone, Hungary.

### GRABEN (pedestrian area)

pavement: Granites from the Bohemian Massif (Variscan orogeny).

### Stop 16. Kornmesser, jewelry shop (abandoned in 2014)

(SUMMESBERGER & SEEMANN, 2008: p. 40, No. 31)

Decoration stone: Rapakiwi granite.

Age: 1,500 Ma.

Origin: Finland.



### Stop 17. Dreifaltigkeitssäule

(Pestsäule)

(SUMMESBERGER & SEEMANN, 2008: p. 43, No. 32)

Built 1682–1693, fulfilling a vow of emperor Leopold I (1640–1705) after the Big Plague (Pest). Building stone: Untersberg "marble" (arenitic limestone).

Age: Upper Cretaceous.

Origin: Salzburg, Austria.





**Stop 18. La Rose** (shop, ladies' dresses)  
(SUMMESBERGER & SEEMANN, 2008: p. 43, No. 33)  
Facade: Sodalithsyenite.  
Origin: Brazil.

**Stop 19. Knize** (taylorshop designed by Adolf Loos, 1910–1913)  
(SUMMESBERGER & SEEMANN, 2008: p. 44, No. 34)  
Cultural monument.  
Facade: Larvikite.  
Age: Permian.  
Origin: Norway.

**Stop 20. H & M** (shop, formerly "Braun")  
(SUMMESBERGER & SEEMANN, 2008: p. 47, No. 37)  
Facade: Serpentinite.  
Pedestal: Paleozoic crinoidal limestone.

## ST. STEPHEN'S PLACE (Pedestrian area)

**Stop 21. Haas Haus**  
(SUMMESBERGER & SEEMANN, 2008: p. 48, No. 39)

Architect: Hans Hollein (1934–2014, Vienna) 1990;  
(preceding "Haas Haus" demolished).  
Facade: Decorated with greenish quartzite until the first floor.  
Origin: Switzerland, "Verde Spluga" from Splügen Pass and greenish gneiss "Verde Andeer".



**Stop 22. Palais Equitable** (American Insurance Company)  
(SUMMESBERGER & SEEMANN, 2008: p. 48, No. 40)  
Building stone: Čistec granite – granodiorite, Bohemian Massif.  
Age: 300–350 Ma.  
Origin: Czech Republic and granite from Maissau.



### Stop 23. Bank Austria

(SUMMESBERGER & SEEMANN, 2008: p. 51, No. 41)

Facade: Red granite “Koral” with dark red feldspar crystals, garnet and biotite.

Age: Carboniferous, 300 Ma.

Origin: Ukraine.

### Stop 24. Dom St. Stephan (St. Stephen's Cathedral)

(SUMMESBERGER & SEEMANN, 2008: p. 52, No. 43)

Architect: the legendary “Meister Pilgram” (Anton Pilgram, around 1460–1515).

Begun in romanesque, finished in gothic style.

Facade: Different stones from quarries around the greater Vienna region.

Age: Neogene, 16 Ma.

**Inside St. Stephens:** two masterpieces of gothic sculptures:



**Gothic pulpit**, late 15<sup>th</sup> century; carved from 7 blocks of fine grained sandstone, by an unknown artist, possibly from the working group around Gerhaert van Leyden. The sculptor may have portrayed himself looking out of the window in the socle.

The monument is made from of Neogene Breitenbrunn sandstone (Burgenland, Austria).

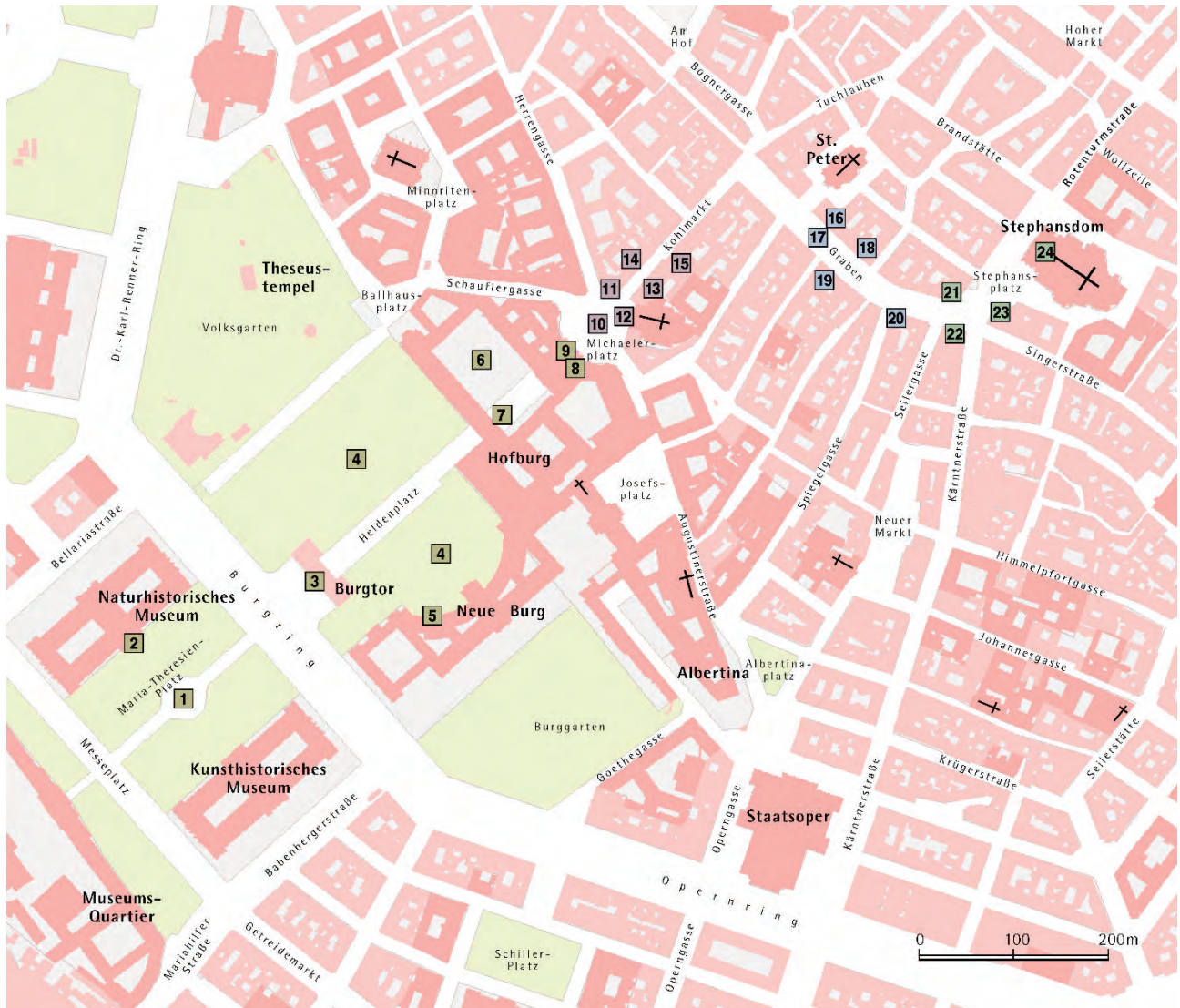
**Sarcophagus** of emperor Friedrich III made of Adnet limestone by Nicolaes Gerhaert van Leyden (1467–1473), after initial mason treatment transport on the Danube to Vienna and then to van Leyden's atelier 40 km south of Vienna at Wiener Neustadt.

After Gerhaert van Leyden's death the work was continued by Max Valmet and finished by Michel Trichter until 1513. The monument is made from of Jurassic limestone from Adnet near Salzburg.



## References and additional literature

- SEEMANN, R. & SUMMESBERGER, H. (1999): Wiener Steinwanderwege. – 159 pp., Wien (Verlag Christian Brandstätter).
- SUMMESBERGER, H. (2016): Vienna “on the Rocks”. Geological Tour downtown Vienna. – Field Trip Guide 78<sup>th</sup> EAGE Conference & Exhibition Vienna 2016, 11 pp., Wien.
- SUMMESBERGER, H. & SEEMANN, R. mit einem Beitrag von ROHATSCH, A. (2008): Geologische Spaziergänge Wien Innere Stadt – vom Maria-Theresien-Denkmal zum Stephansdom. – 64 pp., Geologische Bundesanstalt, Wien.
- SUMMESBERGER, H., SEEMANN, R. & SCHUMACHER, A. mit einem Beitrag von ROHATSCH, A. (2008): Geologische Wanderwege in Wien: Innere Stadt – vom Maria-Theresien-Denkmal zum Stephansdom. – Excursion guide PANGEO 2008. – Journal of Alpine Geology, **49**, 173–200, Wien.



Locations of Stop 1 to 23 in the city of Vienna (adapted from SUMMESBERGER & SEEMANN (2008: Cover inside).