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<sup>1</sup> This report and measured drawings of the James D. Dana House, (HABS No. Conn-273), were prepared as part of the Summer 1964 New Haven Project, under the supervision of Woodrow W. Wilkins.

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James Dwight Dana transformed geology from an investigation of individual rocks and minerals into a study of the earth's evolution. The work of this scholar stimulated the interest of generations of Americans in geology, as well as bringing him international fame as one of the world's major geologists.

Dana married Henrietta Silliman, his mentor's daughter, and in 1849 they commissioned Henry Austin to build this elegant town house for them at 24 Hillhouse Avenue, near the Yale University campus. Dana, the son-inlaw of another great scientist and Yale professor, Benjamin Silliman, was also the father of another scientist and Yale professor, Edward Salisbury Dana, and for over one hundred years Hillhouse Avenue was the address of both Sillimans and Danas. Since 1962 this Italiante villa style house has been owned and maintained by Yale University and it presently houses the offices of the Statistics Department.

## Biography

Born in 1813 in Utica, New York, Dana manifested an early interest in geology. While attending the local high school, he accompanied a science teacher on field trips and began to collect minerals. When he entered Yale University, Dana's interest in geology was heightened by the teaching of Benjamin Silliman. Silliman, the first great teacher of chemistry and geology in America, was not forgotten when Dana became a tutor in mathematics to the midshipmen on board the U.S.S. <u>Delaware</u> in 1833, after graduating from Yale. When the <u>Delaware</u> visited the Mediterranean, Dana continued his study of geology whenever he had the opportunity to land, and when he returned to New York in 1834 he carried off the ship a collection of rocks and minerals.

Once ashore in America, Dana quickly accepted an offer to become as assistant to Silliman. Although he analyzed rocks for his mentor and created some geological charts, Dana still had a lot of time at his own disposal. He used this opportunity to investigate the construction of minerals. Crystallography, as Dana's study was called, constituted a new branch of geology, and the young scientist soon made himself one of its leading adherents. His measurement of thousands of angles in crystals fathered his devising of a mathematical relationship between a

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STATEMENT OF SIGNIFICANCE

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7. Description

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high, not including the basement which is above grade on the rear. The cellar wall is stone and brick, with a facing of dressed ashlar stone on the exterior of the original block.

The main entrance porch, on the east, has a wooden balustrade with a wide railing and ornamental turned and carved wooden columns. The porch is enclosed with wooden sheathing from deck to grade. There is also a basement porch under the library wing on the south, a wooden stoop on the north leading to the sidewalk, and a modern metal fire escape on the south exterior wall.

There are three rectangular brick chimneys on the main roof and one rectangular brick chimney on the west wing. The east entrance wooden door is set into the masonry wall without ornamental trim. However, two upper panels of the five-paneled door are glazed in decorative etched glass, and a pair of full length louvered shutters frame the doorway. On the west wall there are two round-headed windows, one with leaded glass.

The low-pitched hipped roof is covered with sheet metal painted red. The wide overhanging eaves are decorated with wooden soffit, the cornice is corbeled brick stuccoed with an applied band of wooden pendants shaped to form a trefoil void against the stucco. There is one dormer in the rear and two glazed skylights. A low square cupola is located in the center of the main block. Its flat roof is supported by eight heavy scrolls, two at each corner, and there are ten narrow arched windows on each wall of the cupola.

On the interior, the main entrance on Hillhouse Avenue has a deep vestibule and stair hall on the north side of two main rooms which are connected by a doorway. Double glazed doors lead from the rear room to the library on the west, which leads to another room on the north. There is a pantry between this room and the stair hall. The wing which was added on the north contains two rooms and a rear stairway.

In 1896 and in 1905 additions were made to the house. A library addition replaced the porch on the west side, and a wing was added to the north side which fronts on Trumbull Street. However, the flooring in the library, as well as the glass and ceiling work, indicate an early date for that addition, possibly as early as the house itself, thereby implying a change in the original plans.

The second floor has been adapted to office space and seminar rooms. The attic is reached by a closed stairway leading from the second floor hall. At the top of the attic stairs is an open well to the cupola. The attic over the main portion of the house has been adapted for modern use. The attic over the addition is unfinished so that the exterior of the original

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Form 10-300a (July 1969)

### UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE

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# (NATIONAL HISTORIC

LANDMARKS) INVENTORY - NOMINATION FORM

(Continuation Sheet)

# James Dwight Dana House

7. Description

(Number all entries)

page 3

north wall of the house is visible, complete with corbeled cornice. There are traces of ornamental wooden trim at the eaves and indications of an original attic window which was bricked in.

The floors of the main block of the house are one of the nicest features of the interior. Each room has a different pattern of light and dark woods with intricately designed borders. Other floors are oak or modern vinyl tile. Other decorative features include the double doors in the library with a transom light glazed with etched and ruby glass in a pattern of narrow and wide panes. There are silver doorknobs and keyhole escutcheons and marble and tile fireplaces of various colors throughout the first floor rooms.

Except for the boarding up of some of the fireplaces and some minor changes made while adapting the building to office use (currently for the Statistics Department), the house is essentially the same as when the Dana family deeded the building and the land to Yale University in January 1962. The Dana house has been treated quite sympathetically by the university and highceilinged, spacious rooms still are furnished with some older furniture and decorative pieces appropriate to the house.

# Boundary Description

The Dana house is set back 50 feet from the westerly side of Hillhouse Avenue, and is situated very close to Trumbull Street on the north, while a single line of the New York, New Haven and Hartford Railroad traverses the property on the southerly side. The overall dimensions of the house are approximately 60 feet by 58 feet. The property, a little over one-half an acre in size slopes to the southwest, dropping abruptly at the rear of the house. It is nicely landscaped, with several tall elm trees.

The triangular piece of property is the same that Benjamin Silliman sold to his daughter and son-in-law in 1848. As indicated on the enclosed tax assessment map of the City of New Haven, the national historic landmark boundary is as follows: beginning at the west corner of the intersection of Trumbull Street and Hillhouse Avenue and proceeding in a westerly direction the boundary follows the southern curb of Trumbull Street for 289.9 feet, then in a southeasterly direction it runs along the fence dividing the Yale property and that of the New York, New Haven and Hartford Railroad for 337.5 feet, then in an easterly direction it follows the western curb of Hillhouse Avenue for 185.6 feet to the beginning point. Form 10-300a (July 1969)

#### UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE

## NATIONAL REGISTER OF HISTORIC PLACES

(Continuation Sheet)

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James Dwight Dana House

(Number all entries)

8. Significance

page 2

crystal's angles and axes. To help himself in his work, he made glass models of crystals, a pioneering step in this country. The culmination of his study appeared in 1837, when Dana, only twenty-four, published his <u>System</u> of <u>Mineralogy</u>. This book pleased the layman as well as the scientist, stimulating numerous amateurs to collect rocks and minerals.

Although firmly established as a geologist by 1847, Dana's evolutionary, world-wide concept of geology only developed during his participation in the Wilkes Expedition of 1838-42. Sponsored by the United States and led by Lieutenant Charles Wilkes, the expedition covered a large part of the globe's surface in its quest for scientific information. Dana had a splendid opportunity to study geological matters. When the trip was half over, Dana in June 1840, wrote from the Fiji Islands that the natives were cannibals and preferred roasted white men. More important, he said that he had made almost a hundred drawings of caverns, craters, mountains and rock formations. Moreover, he had collected numerous fossils. After the expedition's return to the United States, Dana spent ten years in producing his reports. The very nature of the reports, one on zoophytes in 1846, then one on geology and a final one on crustacea in 1854, show how Dana's point of view had been broadened. The reports appeared in beautiful volumes, but in such limited quantities because of Congress' parsimony that Dana did not receive copies of them.

Dana's appointment as the Silliman professor of natural history and geology at Yale in 1849, a position he held for almost fifty years, did not impede his personal research and writing. Not only did he complete his reports of the Wilkes Expedition, but in 1862 he published his <u>Manuel</u> of Geology. In this book Dana pictured geology as a vast, global experience, showing from the beginning of time how the interaction of air, water, heat and pressure underlay the evolution of the earth. He had thus travelled far beyond a mere commentary on individual rocks and minerals; he told how mountains, valleys, plateaus and plains had been formed. Subsequently, his <u>On the Origin of Continents</u> and <u>Corals and Coral Islands</u> explained the formation of mountains and coral reefs, respectively. His interest and desire to learn never flagged, and when seventy-four he took his family to Hawaii to show them the Island's volcanoes. There the natives called him "the Sorcerer who could rend rocks."

Although a student of evolutionary processes, even Dana found it difficult to accept the theories of Charles Darwin, because of his Puritan heritage he opposed a mechanistic explanation of man's development. Once, during a lecture on the formation of the Coral Islands, he said, "Science, while it penetrates deeply the system of things about us, sees everywhere in the dim limits of vision, the word <u>mystery</u>." As the years passed, however, Dana accepted more and more of Darwin, finally agreeing with his concept of man's rise. Dana always maintained, though, that a divine act began the origin of man.

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When he died on April 14, 1895, Dana left behind 215 published works, a legacy of faithful teaching and a new concept of geology. All of this entered the mainstream of American science, enriching it in a seldom equalled fashion.

