EUROPEAN ARCHITECTURE FOR INDIA.

The Art of Building has to contend against unusual difficulties under a tropical sun, and in India, where the climates from the Himalayas to Cape Comorin are as varied and numerous as the languages spoken by the people, these difficulties can only be mastered by special means.

2. It is not the object of this note to allude to Hindu or Muhammadan styles of architecture, but there can be no doubt that if these styles are to be perpetuated, natives should have the opportunity, under proper organization, of studying the fine works that India has produced from the earliest times. For certain purposes native architecture is the most appropriate; but in a number of cases European styles will be demanded by a majority of English officials and residents in India. That it is possible to build in this country with due attention to the requirements of climate and in some familiar European style, there can be no question. The task has, however, not yet been attempted under the best conditions, or with the fairest chances of succeeding.

3. In countries having temperate climates, human comfort is more easily provided for and materials for construction last longer, but when the destructive
agencies of heat and moisture have a maximum activity—fighting alike against our health, comfort, and the durability of material, the experience of architecture, as we know of it in Europe, fails to lend us the fullest measure of help and guidance.

4. Much improvement has taken place since Englishmen established their Factories, but they have not succeeded in making British architecture suit the conditions of the country. Taking architecture to mean building in the best way with available material, with due regard to comfort, health, appearance, and the traditions of style, it cannot be said that there is cause to be satisfied with our efforts. All the more should we feel this dissatisfaction as we are surrounded by fine native buildings and by types of native architecture admirable alike for their good principles and taste.

5. Although our sympathies may not always go with what Hindus and Muhammadans consider beautiful, yet many of their buildings command admiration, and we cannot but acknowledge that there are correct and true principles underlying native Indian art worthy of careful study and certainly worthy of encouragement.

A wonderful power of adapting themselves to altered conditions in a new land is before us in the Muhammadans, who, after the conquest of India, covered the country with their mosques and palaces and created a new style by blending with their own the traditions and ready executive power of the people. We have only to visit the
old centres of Muhammadan rule to see with what taste and judgment Moslem customs and creed became adapted to the building powers of the conquered Hindus. Structures were erected admirable to their purposes for worship, or the courts of rulers, but still perfectly different to the mosques and palaces the Arabs had produced elsewhere.

In this lies the teaching that although ours is not an Asiatic art, it is no hopeless task for Englishmen to bring the traditions of their familiar architectural styles to India, without doing offence to their comfort and habits, or without going beyond the limits of what are universally true and correct principles. I believe that we may build good churches and houses, making use of what is familiar and beautiful, by searching out and selecting features suitable to the varying climates of India, and by avoiding characteristics unsuitable out here under a burning sun or a tropical downpour of rain.

6. It is unreasonable to expect to successfully meet our wants by transplanting, unmodified, secular or ecclesiastical styles of European buildings. Although by so doing we may secure the shadow of a familiar memory, we cannot be surprised at the elements of discomfort which are imported by our want of originality and forethought. There is scarcely a church in India which is bearable in hot weather, and people unwillingly leave their cooler bungalows to perspire and suffer under the insufficient comfort of the Sunday punkah!

Notwithstanding the many efforts that have been made to secure well planned and comfortable buildings, there does
not exist a distinct organization for concentrating the experience already bought, or for devising new means for improvement.

7. One of the faults repeated perpetually is the neglect to make the most of available materials.

Bombay, with its plentiful stone supply, has of late years acquired a number of fine public and other buildings, but what can be said of the architectural style of the so-called City of Palaces?

The verandah is the one well-pronounced feature which characterises most Indian buildings, and is one capable of great architectural beauty, but the type which has taken a firm hold in Calcutta, ever since Chowringhee was built, is that of Grecian porches. If, like their originals, they had been built in stone, the effect would have been good enough, but brick and stucco is all that Calcutta can afford as a building material, and of brick and stucco these Grecian colonnades had to be constructed.

The consequence naturally follows that to protect the walls and pillars from crumbling away under the influence of the damp Bengal climate, a yearly coat of white-wash has to be applied, and fresh even from the brush, the capitals and columns, copied from the sharp clear Greek outline, acquire with every application a more gingerbread and sorry appearance, all original sharpness being lost by repeated coatings of lime.

There are occasions when to use plaster as a cool and convenient covering for outer walls is an only expedient,
but has the principle been affirmed that plastered surfaces shall and must be protected from the direct action of rain and sun?

8. To select types of familiar European architecture and to show how they may be used under the many varying conditions of Hindustan, is a labor which might be worthily initiated. Taking the broad classes of Stone, Brick, Plaster, or Wooden construction, it needs little to prove how valuable a public service would be rendered by the investigation and analysis of what are the principles to be followed in each class, and by the examination of styles and features suitable to such materials under varying circumstances.

9. The builder has, even in his most modest of efforts, a serious responsibility. Ordinary houses may last through an average existence of 50 years; but whether with credit or not depends entirely on the forethought and care bestowed on the design and execution, on the materials employed, and on the means taken to give their durability fair play. With an elaborate and costly building of a monumental character, this responsibility is increased ten-fold, and to work for future as well as present success is no unworthy task. Although they hold a modest position amongst brilliant achievements of history, the traces and marks of good architecture rank high in the list of "long lives."

10. The styles of European architecture most suitable to India are, broadly, those which have prominent features casting shade or throwing off rain, and in what-
ever materials, we have ample suitable examples to gratify our western tastes if we study the architecture of Europe. We may have to modify details to meet the more trying conditions of the tropics; we may have to use certain forms with greater frequency than we see them employed in the west, but there is no reason why the style, simple though its details, should not bear a distinct Classical or Gothic impress.

11. Where Stone is plentiful, we have a material which well withstands the effects of climate, and architectural resources are consequently greater, we may design with increased freedom, and draw more largely on the types of western buildings.

Colonnades and cloisters, abounding in France, Spain, Italy, Germany and Greece, can furnish an endless variety of form for features which are essential to most Indian buildings.

With a less durable material—Brick, we have to think more of protecting the outer wall, but the brickwork and terra cotta of Italy, England, France, and Germany may be referred to for every kind of combination. In places where there is nothing but clay, good honest brick is much to be preferred to pretentious and perishable stucco.

How much better to have had a light Italian brick and terra cotta building for the Calcutta Museum, instead of the ponderous mass of brick plastered over with cement which now exists!
Terra cotta used to be made in India in old days, and there is no reason why there should not be a revival of the art when costly and elaborate buildings have to be erected in Bengal, or other parts of India, where building stone does not exist.

In the case of Wood as material, England, Normandy, and the Alps have buildings as appropriate and pleasing as it is possible to conceive, and the high pitched roof and frequent use of eaves common to them, would enable the designer for India to easily secure any necessary protection against sun and rain.

With Plaster (so common in India, and often hideous and false) there is a much narrower ground to examine. Stucco ornament was used by the Italian artists of the 16th and 17th centuries, and by Tuscan architects and decorators generally. There are also several kinds of honest work worthy of repetition at Hildesheim and Halberstadt in Germany, dating from the 11th century.

Plaster ornament must of course be flat and well protected, but it should never affect to be anything but plaster, and all imitations of stone sculptures should be shunned.

When ornament in plaster is wanted for exteriors, one of the most suitable kinds is in my opinion that which is called "Sgraffito." It is the scratching of ornaments upon a layer of light colored plaster applied to a darker ground. The light part of the upper layer repre-
sents the design and the darker layer the background. The ornament may be geometrical as for string courses, arabesques, panels, &c., or figure subjects for friezes.

The cost of the work as an ornament is not excessive, and its application, with judicious taste, to some of the Calcutta buildings would give them a new character which every one would appreciate and admire.

12. The creation of a system to secure suitable designs of buildings for the various areas of Indian climate would tend to architectural improvement and experience would accumulate to the great benefit of good taste and economy.

H. H. COLE, CAPT. R. E.